

AMERICAN

JANUARY • 1953

Cinematographer

THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

THEATRE
TELEVISION
INDUSTRIAL
AMATEUR



In This Issue . . .

- Plan Your Scenes In Sequence
- Techniques For Filming Exteriors
- Contribution of Photography To 'Production Value'

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"THE THIEF" takes top honors...

Du Pont "Superior" 2 captures proper moods in "no-dialogue" drama

"The Thief"—suspenseful thriller produced by Clarence Greene for United Artists and starring Ray Milland—is another smash picture made this year on Du Pont Motion Picture Film.

Not a word is spoken in the picture . . . so skillful camera work was essential to create the mood of the plot. "Superior" 2 Type 926 film provided the exact contrast and latitude needed.

Director Russell Rouse and Sam Leavitt, Director of Photography, combined their skills to meet a deadline which demanded shooting under the toughest weather and lighting conditions. Type 926 Film solved the problem . . . enabled the camera crew to obtain dependable results on every "take." Photo shows cast and crew atop the Empire State Building, 1050 feet above the sidewalks of New York.

Throughout the motion picture and television industries . . . for both interior and exterior shooting . . . leading cameramen rely on Du Pont products. In high- or low-key lighting, even under the worst conditions, these films assure bright, contrasty screen or kinescope pictures . . . outstanding sound recording. Whether you require a negative taking or positive stock, duplicating or special-purpose film . . . there's a dependable Du Pont product for the job. E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware.

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DU PONT MOTION PICTURE FILM

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"a **RUGGED** *camera..."*



Gene and Charlie Jones, NBC-TV's famous twin team, examine one of their Bell & Howell "70" cameras in a Korean forward area.

NBC's newsreel men prove B&H cameras under fire

In the thick of the Korean action from the very beginning, the Jones Brothers have sent NBC-TV some of the finest War pictures ever filmed, including many exclusives. These movies were filmed under exceedingly tough and dangerous conditions. In fact, when Gene Jones was wounded in the chest at the Inchon invasion, he had to inch his way back to the beachhead through hundreds of yards of severe fire . . . protecting the pre-

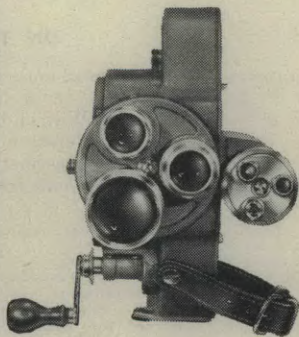
cious film in his B&H "70" for NBC-TV *News Caravan* viewers.

Here's what the Jones Twins say about their Bell & Howell Cameras in a letter to Robert McCormick of NBC: "... We try to ship or shoot 500 feet per day. The Bell & Howell is a rugged little camera. Both of ours have been damaged in combat . . . but we've managed to have them repaired by Signal Corps people."

Features of the New B&H 70-DL

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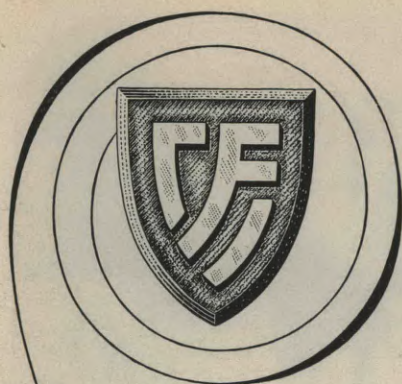
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The Bell & Howell "70" camera is indeed a "rugged" camera. But that isn't the only reason why it is the favorite of professionals and ambitious amateurs. This camera is designed to make the highest quality movies, yet can be carried anywhere . . . either hand held or set up in a matter of seconds to shoot under the most adverse conditions.

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PUBLICATION OF AMERICAN SOCIETY OF CINEMATOGRAPHERS

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ON THE COVER

FOR SEQUENCES for their new musical, "By The Light Of The Silvery Moon," Warner Brothers converted one of the sound stages into a big ice rink. Here director of cinematography Wilfrid Cline, ASC, (on boom, wearing eye shade) and his Technicolor camera crew film a closeup of the sleigh party which includes (l to r) Leon Ames, Rosemary DeCamp, Mary Wickes, Billy Gray, Doris Day, and Gordon MacRae.—Photograph by Jack Woods.

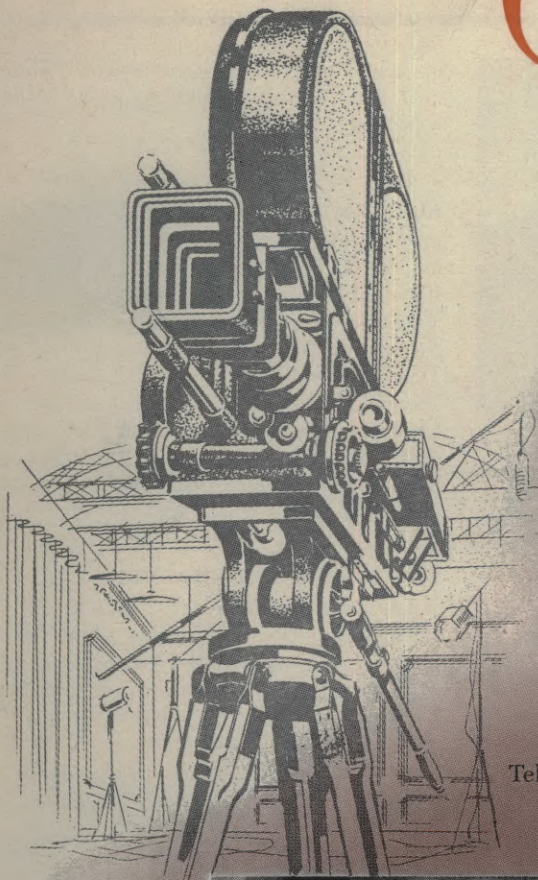
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Tom Kelley Studios shoots a TV commercial for North American Airlines with this Mitchell 35 "NC". Cesar Romero is shown at center.



One of three Mitchell 35mm "BNC" Cameras used by Desilu Productions on the "I Love Lucy" series with Desi Arnaz, right, and Lucille Ball.

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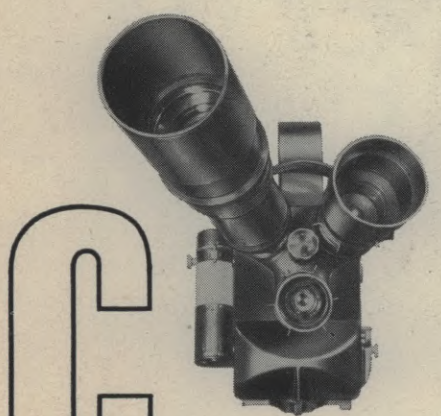
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Hollywood Bulletin Board



ARTHUR MILLER, ASC, is congratulated by Fred W. Jackman, ASC, following presentation of commemorative plaque to Miller at Society's December meeting.

THE ASC paid special tribute to one of its old-time members, Arthur Miller, when at the Society's December meeting it presented him with a plaque commemorating his long and brilliant career as a cinematographer. Following the acceptance, Miller talked briefly on his early-day experiences and introduced some of his old-time co-workers.

A chapter of the old silent days serial, "Perils of Pauline"—which Miller filmed—was screened following the dinner. (More details on Arthur Miller's cinematographic career appears elsewhere in this issue. ED.)

CHARLES ROSHER'S long-anticipated retirement from the Hollywood motion picture industry became reality last month, when he and Mrs. Rosher flew to their island estate in Jamaica where they will settle permanently.

Speculation at this time indicates that Rosher will return to Hollywood at least once yearly to photograph a picture for his favorite MGM director, George Sidney.

KARL STRUSS, ASC, for the third consecutive year, was a member of the judging panel for the annual Sylvania Television Awards.

GEORGES BENOIT, one of ASC's old-time non-resident members, passed away last month in France. Benoit had been a member of the Society since 1921, and had served on its Board of Directors. In recent years he had operated a small motion picture theatre in a Paris suburb, and made it a point always to look

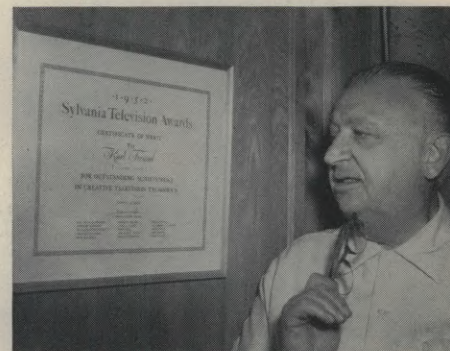
up his American contemporaries whenever they were assigned to photograph a picture in France.

AL GILKS, ASC, had an interesting photographic assignment last month when he was selected to photograph two TV films in the series, "The Swayzes In Vacationland," featuring John Cameron Swayze of the Camel Caravan TV show. Most interesting part of assignment was shooting sequences in San Francisco's Chinatown. Using a Mitchell BNC camera and skeleton crew, Gilks followed a documentary technique in the filming throughout.

BUSIEST CINEMATOGRAPHER in Hollywood perhaps is Karl Freund, ASC. Besides shooting the weekly "Our Miss Brooks" TV show—the "I Love Lucy Show" group is vacationing pending Lucy's forthcoming blessed event—Freund has been delivering lectures or consulting with various companies on his light and color measurement techniques.

Since presenting his paper on "Shooting Live TV Shows On Film" at the SMPTE convention in Washington, D.C. last October, Freund's paper has been presented before groups in Los Angeles, San Francisco, Chicago, and Ottawa, Canada. Further presentations will be made in New York City and Dallas, Texas this month.

Freund, incidentally, is the only film cameraman to share in the 1952 Sylvania Awards. Last month he was presented with a Certificate of Merit for his "I Love Lucy Show" photography. The award cited him for outstanding achievement in creative television techniques.



KARL FREUND, ASC, is only cameraman to share in Sylvania TV Awards for 1952. Merit certificate was awarded him for filming "I Love Lucy" shows.

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Mr. Len Roos
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Los Angeles, California

Dear Mr. Roos:

We have been using the Kinevox recorder in our teaching and production at Brooks Institute of Photography. It has proven successful beyond our greatest expectations.

The ease of operations has made it possible for our students to turn out high fidelity recording with a minimum of instruction, and in doing so, allows us more time for other instructional requirements.

The Kinevox has been tried under all types of conditions and has worked perfectly.

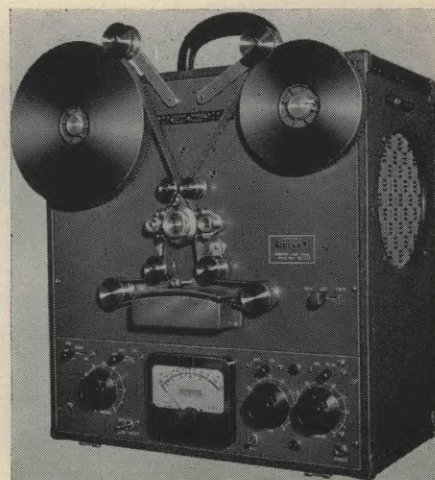
Just recently, we took the recorder into the interior of Arizona to record some Indian dances - this trip was made on the worst possible roads and weather conditions. When we were ready to shoot, the recorder was always in excellent working order and turned out a top sound track.

Thanks again for designing this fine recorder. In the future we hope to add to our present equipment.

Yours sincerely,

Ernest A. Brooks
Ernest A. Brooks
Director

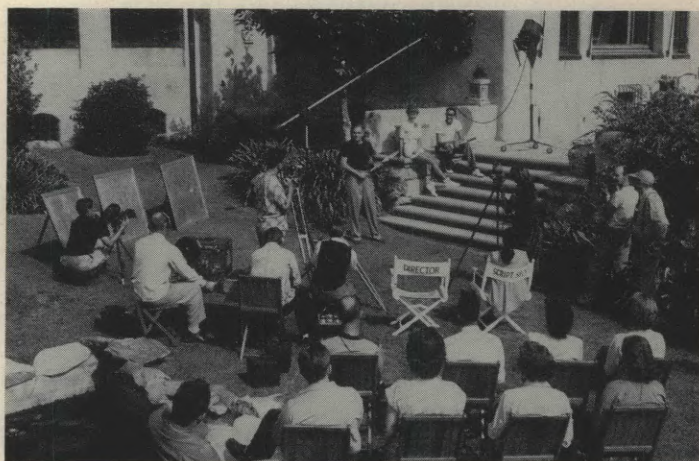
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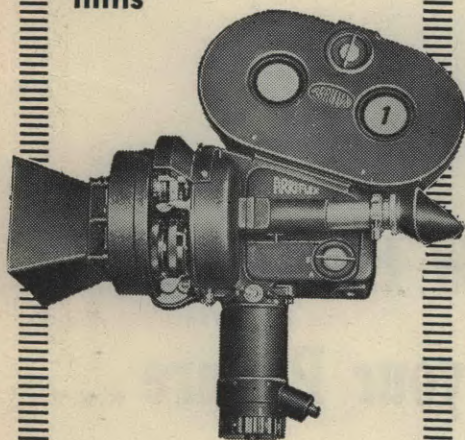
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WHAT'S NEW

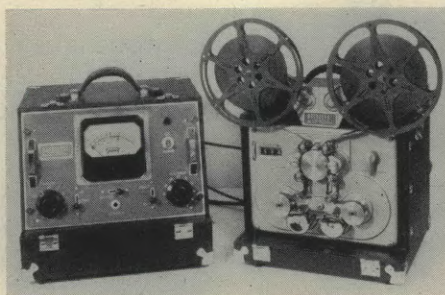
in equipment, accessories, service

Collapsible Camera Dolly — A new collapsible 3-wheel camera dolly is announced by National Cine Equipment, Inc., 209 W. 48th St., New York City. Constructed of sturdy cast aluminum, it folds into a single light-weight unit, provides



an adjustable spring seat for operator, and has extra-wide rubber-tired wheels for easy steering and added rigidity. Jack screws provide leveling or locking in stationary position. The dolly folds into a compact case 20" x 20" x 36".

Kinevox In Canada — Kinevox, Inc., Burbank, Calif., announces that Perkins Electric Co., Ltd., with offices and display rooms in every province in Canada, has been appointed sole Canadian distributor of Kinevox synchronous magnetic film recorders and associated equipment. Len Rops, Kinevox president, reports increasing use of Kinevox recorders in the fast-growing Canadian film industry.



Magnasync Recorder — Magnetic Recorders Company, 7120 Melrose Ave., Los Angeles 46, Calif., announce the Magnasync, a new portable, synchronous magnetic film recorder which records on either 16mm or 17½mm single or double-perforated film, and sells for the

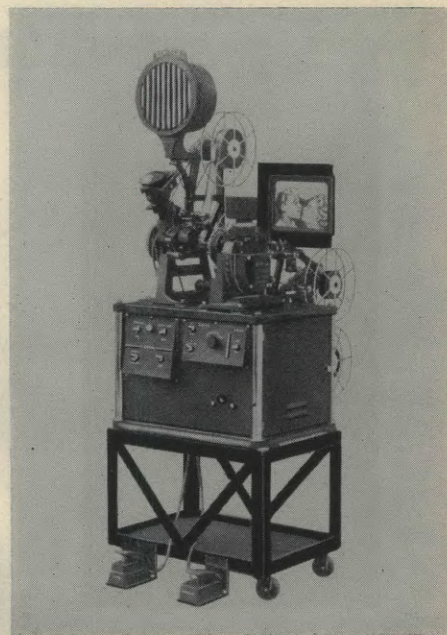
remarkable low price of \$1,275.00.

Designed for every professional use in film production, it features full 1200 ft. film capacity, footage counter; sync motor drive; is adaptable to interlock; and weighs only 39 lbs.

Descriptive literature is available; also demonstration of equipment in the So. California area.

Acmiola Editing Machines — Acmiola Distributing Co., a division of S.O.S. Cinema Supply Corp., New York City, announces that 19 different models of Acmiola film editing machines are now available from the company, with shipments available within 3 months following receipt of order.

Design of the equipment provides familiar straight up and down threading. All machines have reversible variable speed motors, with foot and hand controls; an unusually sharp film image is projected on a 6" x 8½" shadow box screen. Same image can also be pro-



jected up to 3 ft. in width on separate screen, if desired.

All sound machines have built-in hi-fidelity power amplifier. Multiple-head models provide separate controls for each sound head with overall mixing gain control. A comprehensive illustrated catalog of Acmiola editing equipment is available.

Colortran Announcement — L. V. Grover, originator of the Colortran and the
(Continued on Page 45)



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JUAN E. VIGUIE JR., *Cameraman*

President of Viguie Films

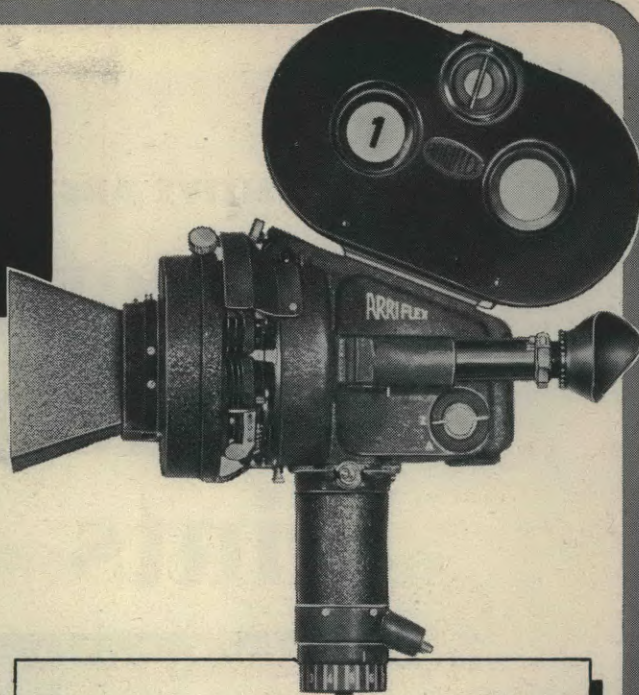
Writes Mr. Viguie:

"... of the two Arriflex 35mm cameras we own, one is in constant use in Puerto Rico and one in the States. In addition to our regular work filming Viguie News, a Spanish language newsreel, we are frequently called upon to cover events for Telenews, Universal, and other major newsreel companies.

The Arriflex 35 is my favorite camera because it gives me the results I want with little or no effort. To be able to see the actual image on a large groundglass screen, even when filming, is a most wonderful thing, and it makes focusing and framing convenient and simple. I also like the quickly interchangeable magazines, the electric motor drive with its small portable battery, eliminating tedious winding, and the fact that despite all this the camera is light enough for handheld shooting..."

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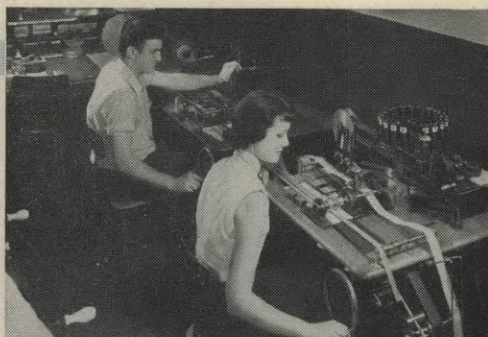
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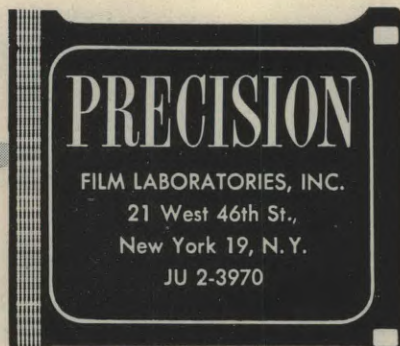
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CLOSEUPS

Notes and Editorial Comment

by the Editor...

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

ERNIE HALLER HOLLERS BACK!—It is incredible to what extent dissident factions in some foreign countries can read the most biased of thoughts into the reportings of the American press. It is a growing evil in which those dedicated to tearing down America and Americans make use of every opportunity to distort facts in an effort to discredit us before their people.

What brings all this up is a piece entitled "Ernie Haller 'Hollers'!" which appeared in a recent issue of *Blitz*, published in Bombay, India. The writer of the piece, hiding in by-line-less anonymity, says:

"The camera does not lie, or so they say! But we know for a fact that a certain cameraman does, and has!! The gentleman concerned in the case is the much-feted cameraman, Ernie Haller of the Technicolor crew of "Monsoon" and "Jhansi-Ki-Rani," who, after a brief stay in this country, has, like other Americans, written an article about this land of ours."

Blitz's writer then goes on to criticize some of Haller's statements, reported in the article by Frederick Foster in the June, 1952, issue of *AC*.

In rebuttal, Haller has written an open letter which he has titled: "Ernie Haller Hollers Back!"—in which he states:

"Ernie Haller hollers back because, considering that at the time the article in question was written there was a possibility that I would return to India to photograph another picture, I certainly would not intentionally ridicule or belittle the Indian people who had aided me not only in my work but by their many kindnesses.

"The interview, which culminated in Frederick Foster's story, was patterned on the American's working problems in another country. Concerning the tea periods which I mentioned, and to which *Blitz* takes exception, why did not *Blitz's* critic quote my *entire* statement which said further: "... similar to the coffee breaks of the American worker."

"As to re-educating my Indian staff to Western studio methods, every cameraman regardless in what foreign country he is assigned to photograph a picture, must school or re-train the native technicians assigned to work with him. This is not to belittle the native worker, but the training is necessary in order to educate the technicians to the cameraman's own methods, admittedly essential.

"My greatest difficulty, perhaps, was on the American production, "Monsoon," because of the *lack of equipment that had been promised me*, and the very long hours we were compelled to put in.

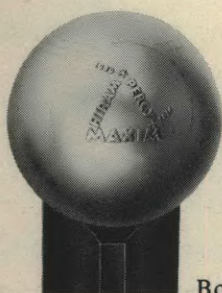
"The color prejudice which the *Blitz* writer mentioned, is definitely not inferred anywhere in Foster's article, and is simply his own distortion of the facts. I have travelled all over the world, have met and made many friends in many lands, and never once have I shown any prejudice of color or faith—for I live by my country's ways: Freedom of speech, of color, and of creed.

"To my producer in India, Mr. Sohrab Modi and his charming wife Mehtab, I have only the very highest regard and wish them the greatest success with their picture "Jhansi-Ki-Rani," of which I did a small part in the photography. And as for my associate cameramen, Mr. Malhotra and Mr. Sarpodar, who were a constant help to me, I have never met two finer men anywhere.

—Ernie Haller."



SEVEN out of 10 winners used Bolex!



MAXIM AWARD WINNER AS WELL AS 6 OTHER WINNERS IN ACL "BEST AMATEUR MOVIE OF 1952" PREFERRED THE VERSATILE BOLEX!

Bolex joins with the Amateur Cinema League in offering heartiest congratulations to Mr. & Mrs. T. Lawler and the 9 other 1952 prize winners. Seven Bolex users out of 10 prize winners, and in addition, 5 Bolex users out of 12 honorable mention winners, are a positive indication that Bolex versatility SWEEPS THE FIELD! Listen to what they say about Bolex!

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"Our Bolex is the only movie camera we have used, and it has seen much service since we bought it in 1943. It has made the 'Ten Best' twice before."

Mr. Haven Trecker, Kankakee, Ill.

"My Bolex H-16 has come through for me again!"

Mr. A. T. Bartlett, Queensland, Australia

"My Bolex is a joy to use; with it I have made four award-winning films."

Mr. Mathis Kverne, Oslo, Norway

"My whole film was taken with the Bolex single-frame setting. It worked perfectly all the time. I would not change my Bolex for any other."

Mr. Geo. A. Valentine, Glenbrook, Conn.

"I chose the Bolex H-8 because it's the only 8mm camera that has all the features needed for professional effects."

Mr. Robt. G. Williams, Toledo, Ohio

"I like my Bolex because its built-in features let you know right where you are every moment."

Mr. James L. Watson, Worcester, Mass.

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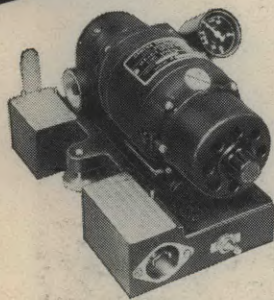
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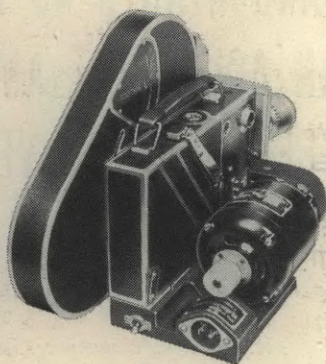
VARIABLE SPEED MOTOR—110 Volt AC/DC—
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Motor drive your Cine Special with confidence! Tachometer is mounted in clear view of operator. Calibrated from 16 to 64 frames per second. Definite RED marking for 24 fps. Electrical governor adjusts speeds. Steady operation at all speeds. No adapters needed. Motor coupling attaches to camera and couples to motor. Spring steel drive arm shears if film jam occurs. Easily replaced.

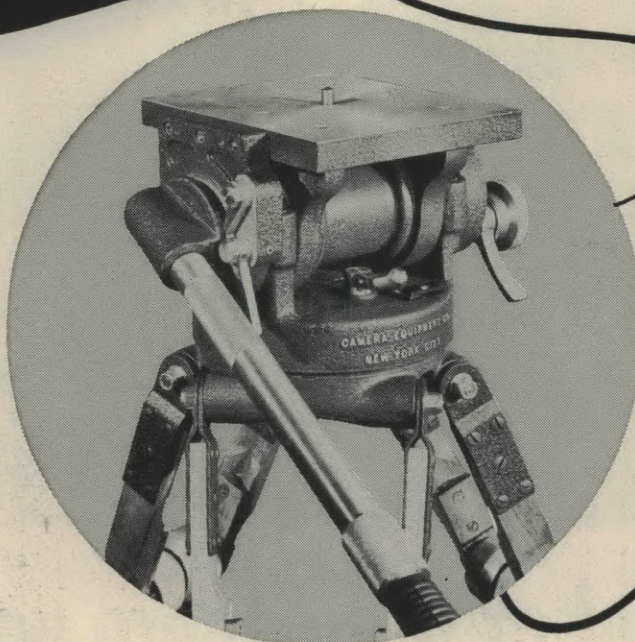
SYNCHRONOUS MOTOR DRIVE—110 Volt AC
—Single phase, 60 Cycle.

Runs in perfect synchronization with either 16mm or 35mm Sound Recorders. Mounting platform permits removal of magazine while camera remains mounted on motor. Spring steel drive fin coupling prevents damage if film jam occurs.

Knurled knob on armature permits rotating for threading. "On-Off" switch in base. Platform base threaded for 1/4" or 3/8" tripod tie-down screw. Rubber covered power cable with plugs included.



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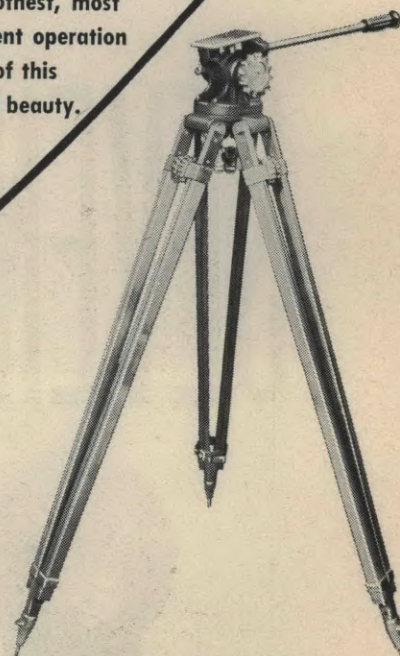
PERFECT BALANCE prevents mishap if the lock lever is not applied. Quick release pan handle locks into desired position. Mech-

anism is enclosed, rust-proof, needs no lubrication.

Tension adjustment for Camera Man's preference. Built-in spirit

level. Telescoping extension

pan handle. We defy you to get anything but the smoothest, most efficient operation out of this tripod beauty.



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STOP CALIBRATION of all type lenses, any focal length.

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BY FAMED ENGLISH SCIENTIST,
SIR HUMPHRY DAVY,
USING TWO CRUDE CHARCOAL RODS
AND A PRIMARY BATTERY.



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FOOTCANDLES PER SQUARE
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COOLNESS THAT RESULT FROM THE HIGH EFFICIENCY AND SMALL
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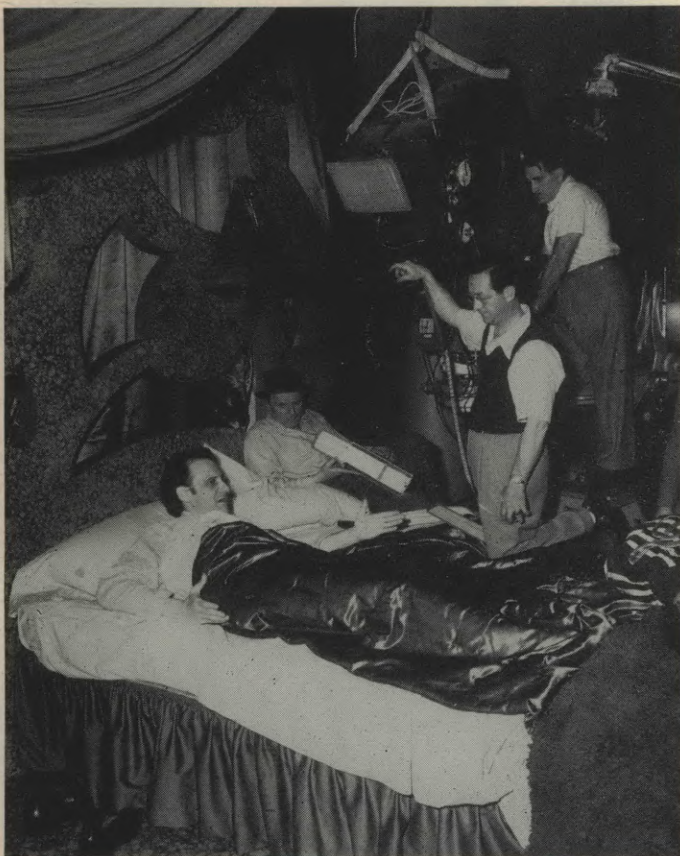
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Set Lighting Innovations Mark The Photography of '5000 Fingers of Dr. T.'

Frank Planer used reflected, ultraviolet, and fluorescent light in revolutionary new ways in photographing Kramer's fantasy film.

By ARTHUR ROWAN



A FANTASTICALLY CREATIVE masterpiece of wild imagination has opened the eyes of all Hollywood—eyes which over a long period have become accustomed to spectacle in virtually every shape, shade and form.

The picture in question is the Kramer Company's musical extravaganza in Technicolor, "The 5000 Fingers of Dr. T.," conceived as an entirely new and vital approach to entertainment via movies.

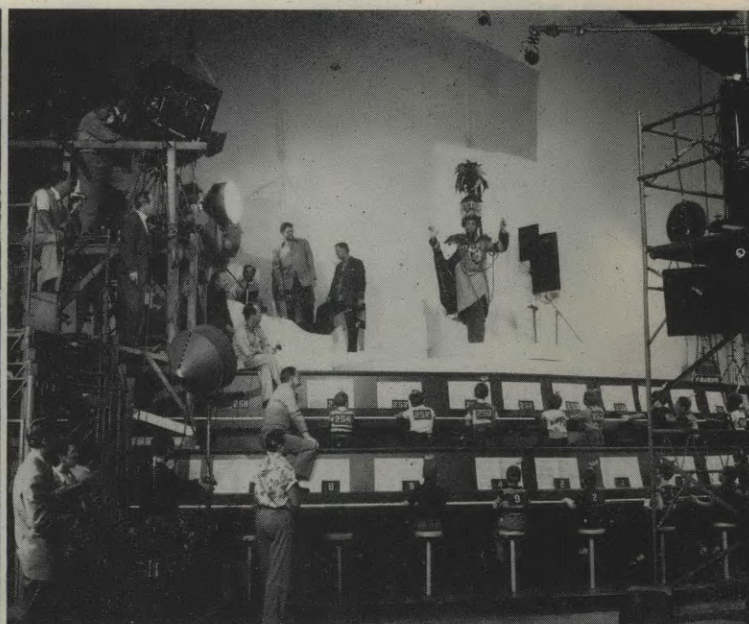
Director of photography Frank Planer, ASC, added a new touch to the filming of "5000 Fingers" when he devised a means of changing lighting and color before the very eyes of the moviegoer by interspersing use of ultraviolet and fluorescent light. Another innovation was the use of the new cone lights, developed by Columbia Studios' electrical department and described in *American Cinematographer* for June, 1952 (Pp. 248). Cone lights are said to produce the broadest and most distant "shadowless" light ever attempted in motion picture production. Planer found them made to order for lighting the sets of this production.

"The 5000 Fingers of Dr. T." comes to the screen as a vision, the dream world of a nine-year-old boy. It is painted his way, not Rembrandt's way. The sets are crookedly fantastic as a small boy would draw them. The entire picture is

FILMING A CLOSEUP of Hans Conreid for "5000 Fingers of Dr. T." Here director of photography Frank Planer uses his famous "Houdini" eye-light on Conreid as the camera rolls for the scene.



GENERAL VIEW of the piano courtyard scene, said to be largest ever constructed in Hollywood, shows the lighting pattern followed by cameraman Planer. The cone lights may be seen mounted overhead as well as on floor standards. Planer and his camera are on parallel at left.



A CLOSER LOOK at same set. Hans Conreid (Dr. T.) is being filmed in close-up directing his boy piano pupils seated at giant keyboard. Here, cone lights augmented by Brutes illuminate the scene. Wall of set reaches to stage ceiling, is made entirely of white muslin.

wildly imaginative, as only a small boy can imagine. And contributing most effectively to the overall pictorial effect is Frank Planer's unique lighting for the Technicolor photography.

Briefly the story concerns a typical American boy whose mother has her heart set on him becoming a piano virtuoso. His teacher is Dr. Terwilliker (Dr. T.) who shares the mother's view that the lad will learn to play the piano, "even if I have to keep him at that keyboard forever!" One day when the lad would rather be outdoors playing baseball than practicing his piano lessons, he falls to daydreaming. Dr. Terwilliker becomes an ominous ogre with 500 little boys trapped in his vast piano courtyard. Here the boys are destined to sit at the giant keyboard practicing 24 hours a day, 365 days a year—5000 fingers practicing the scales in unison.

The lad seeks to escape from Dr. T. and what he encounters in weird and fantastic dream situations makes for one of the most entertaining pictures of the year—and made for Frank Planer perhaps the most challenging assignment in color photography of his entire career.

To begin with, Planer faced something radically new in sets from the standpoint of lighting. According to him, "5000 Fingers" utilizes more sets than any picture in his recollection; at one time sets for the production occupied every sound stage on the Columbia lot.

Largest set in the film and one of the biggest ever to grace a motion picture screen was the giant piano courtyard of Terwillikerland, which occupied all of stages 8 and 9 at Columbia Studios. Its biggest feature, of course, was the longest piano keyboard ever built.

Stretching the length of the immense courtyard which featured weird staircases, entrances to bottomless dungeons and topless staircases, the piano completely dominates the scene. The courtyard set, one of the costliest ever built on the Columbia lot, was constructed mostly of battens covered with white muslin, 3500 square yards of it, instead of the conventional wallboard. The reason, of course—economy. But this placed a tremendous burden on director of photography Planer, for unlike with sets of solid construction, he faced innumerable problems in lighting. The muslin, being translucent, precluded placing lights in rear of the sets, unless certain areas were carefully goboxed or backed up with wallboard flats, black

backing material or both. In lighting the narrow staircases, special cutouts were mounted before the lamps in order to funnel the beam of light so it wouldn't strike the muslin covering of the sets and thus reveal the flimsy construction.

The lighting equipment Planer used is one of the interesting highlights of the production. The cone lights, which Columbia lighting engineers had just introduced for test purposes, were used in large scale for the first time in "5000 Fingers." Planer had observed them during the tests, decided they were the ideal light source for illuminating the tremendous areas of the larger sets. The cone lights give a reflected illumination of soft, "shadowless" quality, are capable of lighting larger areas than most other type set lighting units, and greatly reduce rigging and maintenance costs. In all Planer used 24 cone lights and 6 arcs (Brutes) for set lighting.

Hydraulic parallels were widely used, both for camera and key lights. These proved most ideal whenever camera position was changed; the lamp parallels were simply rolled to another position and the platform lowered or elevated according to the key light height desired. In many cases, the hydraulic parallel proved a better mount for the camera than a crane because of the greater height range. This was especially true when filming on the huge piano courtyard set which required shooting from great heights.

The most challenging problem, of course, was how to get detail and modeling into the all-white muslin covered sets. Although the contour of walls, staircases and other details were readily apparent to the eye, no detail had been emphasized through painting of the sets. This was left to Planer, whose challenge was to so light each set that details were brought out with contrasting shadows, and by delicately shading the light on set walls and background to give the desired separation. The scenes on this set were perhaps the only ones filmed in full scale lighting and embracing the complete range of color.

When the company moved to the dungeon and the Mound Country sets, both photography and lighting assumed a completely new pattern. Here the boy's experiences in attempting to escape his dilemma were staged. Pointing up the mood were the dark, low-key sets, the eerie mood lighting contrasting with the metallic coloring of the mouldy characters in the

(Continued on Page 42)



FANTASTIC dungeon scene involved tricky low-key lighting, use of ultra-violet and fluorescent light for weird effects. As with most scenes in this sequence, action on this set was generally shot with camera on crane and well elevated.



TOMMY RETTIG flees from the terrible butterfly men on this set of the fabulous Mound Country. Planer used eerie green light and grey smoke to give the scene the desired awesome effect. The camera, mounted on crane at left, followed the action in closeup. Cone lites and arcs supplied illumination.

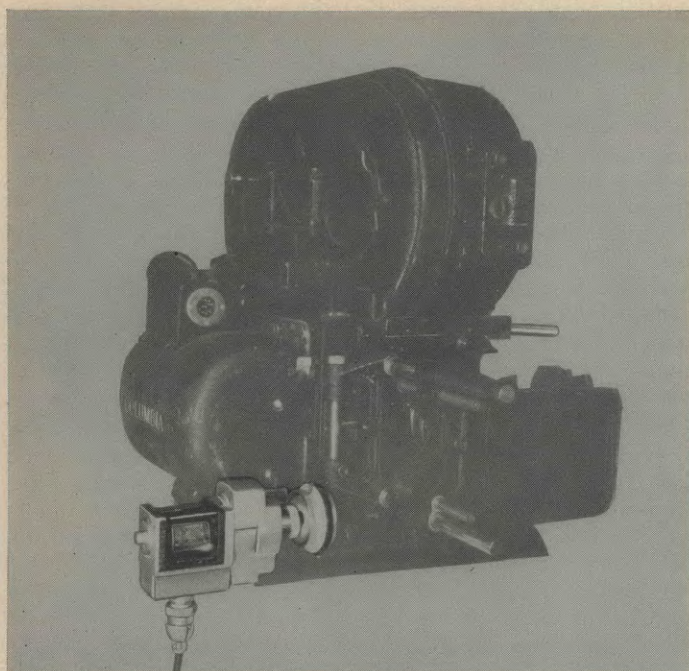


FIG. 1—Remote control motor drive is attached to the Mitchell BNC at point of lens knob on side of camera opposite the finder. Motor is a split-phase, high-torque, low-inertia unit designed for the installation.

Servo Mechanism For Remote Control of Mitchell BNC Lens and Finder

By JOHN D. McCULLOUGH

Camera Engineer, Columbia Pictures Corp.

LAST MONTH Frederick Foster described some interesting methods that have been developed in recent years to facilitate automatic or remote control of lens and finder of motion picture cameras when making follow-focus shots. More recently a Servo motor-driven remote control for the Mitchell BNC camera has been developed by John D. McCullough, Columbia Pictures camera engineer, which he describes in the following article.—EDITOR.

THE SCIENCE OF Servo Mechanisms concerns itself in this application with getting a lot of work done at the output end of a system with a minimum of manual work at the input, and with an accurate position relationship maintained.

The nature of the mechanical design of the Mitchell BNC camera is such that efforts thus far to control the lens focus and finder focus and parallax through use of hydraulics, selsyns, flexible cables, etc., have met with little success.

The gear train, lens barrel friction, finder cam, finder lead screw and finder spring loading all contribute to a friction drag which on the camera tested required a torque of 50 inch ounces before the system would move.

The approach to the Servo Mechanism specifications was to add to this torque requirement an arbitrary maximum speed for focus change requirements. This was established at one revolution at the lens in four seconds; a figure which will handle most focus change problems with a generous margin.

The complete system consists of the hand control (Fig. 2), carried remotely from the camera by the assistant, the motor unit which couples to the camera (Fig. 3), the electronic amplifier, and necessary connecting cables.

In the basic Servo Mechanism circuit, the hand control potentiometer and the camera unit potentiometer are used to generate a low voltage position error signal when the manual control is moved. The motor is stationary when the potentiometer sliders are at a null point. With the least condition of unbalance the resulting voltage is amplified and supplied to the variable winding of the motor in correct phase to drive it in a direction to cancel the error.

The motor is a split-phase, high torque, low inertia unit designed for this type of application. One winding is supplied continuously with 110 volt 60 cycle and the other winding is supplied from the amplifier circuit as outlined above. The motor effects a cancellation of the potentiometer error

(Continued on Page 37)

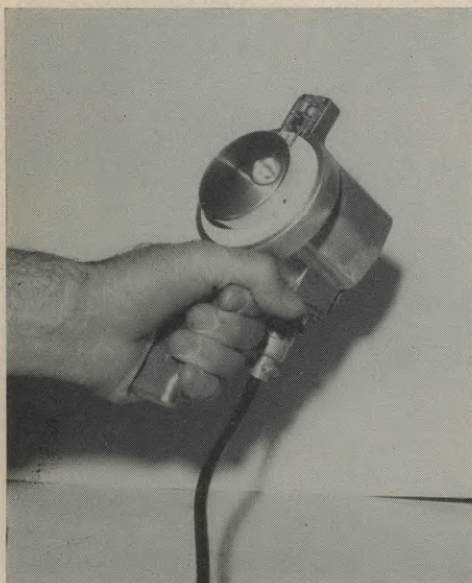


FIG. 2—In the hand control, the dial is identical with that on the camera; three turns of control knob is equivalent to approximately 330° turn of lens diaphragm.

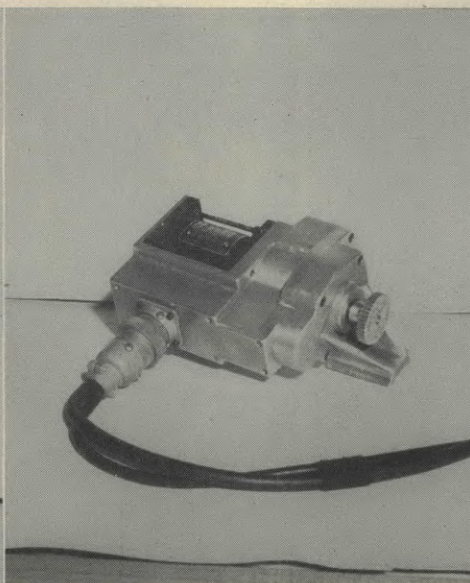


FIG. 3—Motor unit which couples to the camera and actuates the lens control knob. When mounted, it appears as shown above in Fig. 1.

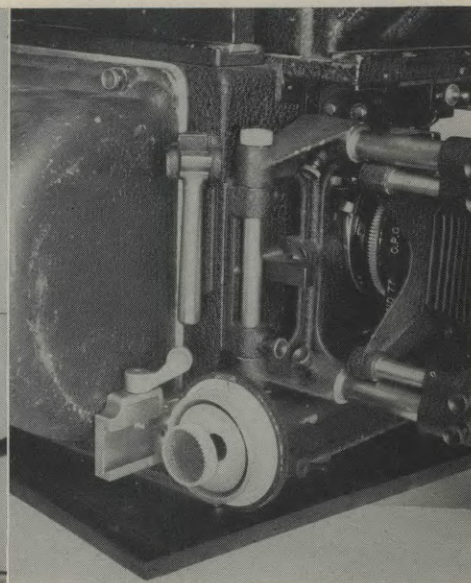
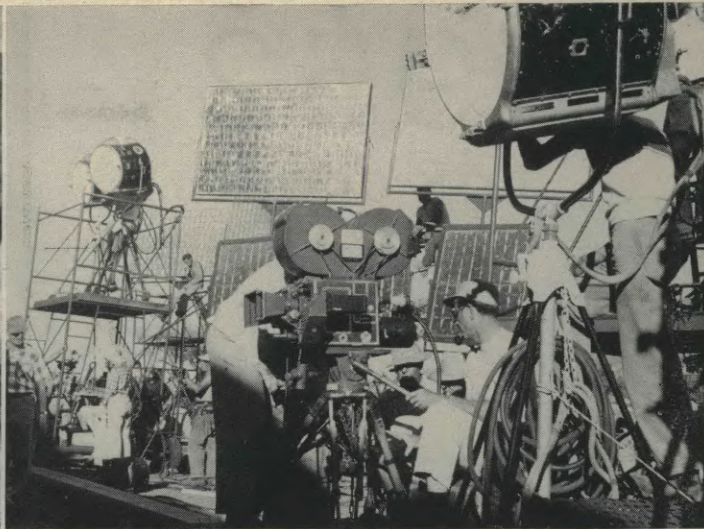


FIG. 4—The fine adjustment knob of camera lens (lower left) is broached to fit the serrated output fitting of the servo motor unit shown opposite in Fig. 3.



SCRIMS of gauze or netting are an important adjunct to filming exteriors in sunlight. As shown here, a scrim placed out of camera range between subject and sun, breaks up harsh light of the sun.



REFLECTORS are a must on outdoor shots where booster lights are not available. Their function is to throw light into shaded areas of the set. Often both reflectors and booster lights are used, as shown above.

Techniques For Filming Exteriors

Some of the basic practices which contribute to successful outdoor photography are explained here for the student of cinematography.

By CHARLES LORING

THE PROBLEMS ENCOUNTERED in the shooting of an exterior motion picture sequence arise, paradoxically enough, from the rather over-abundant generosity of Nature. That is to say, our main concern in outdoor filming is not so much to secure the basically necessary photographic elements (light, backgrounds, etc.), but to *control* these elements that have been so lavishly placed at our disposal.

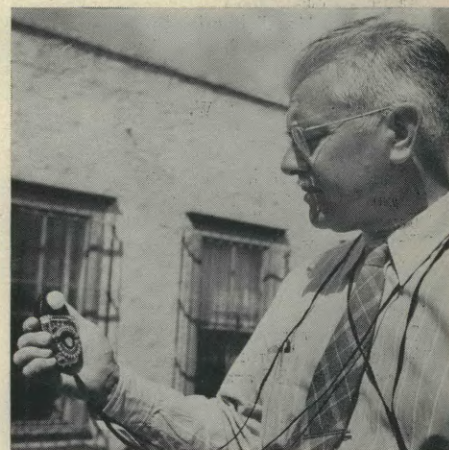
In modern professional practice, a substantial amount of exterior sequences are shot inside sound stages because of the firmer control the technician can exercise over the mechanical factors of photography. However, for the semi-professional producer, the outdoors offers an infinite number of perfect photographic backgrounds, a strong and constant source of light, and infinite room in which to stage action and place equipment.

Ways and means of controlling these elements are basic, and once learned, can be followed consistently with good results. Taking for granted that the reader knows these fundamental techniques, we shall discuss some of the finer points of photography necessary to the filming of exterior sequences.

Granted that there are many factors that influence the overall excellence of exterior cinematography, it can be said with emphasis that the most important single influence on general quality is *correct exposure*. Even with present-day wide-latitude emulsions and modern methods of processing geared to compensate for faulty exposure, the fact remains that a perfect scene results only when the exposure has been calculated "on the nose."

In order to achieve this result, the cameraman must consider, not only the mechanical requirements of his scene, but *the particular kind of processing which will be given his film after exposure*. For this reason, he will be wise to run tests at standard exposures and send them off to the lab for processing in order to find out what is the standard of development for that particular lab. No two laboratories process film in exactly the same way, and the cameraman must make inquiries in order to adjust his exposure techniques (as well as his own evaluation of the film's speed) to the particular lab that is processing his film.

A good many novice cinematographers have asked the question: "What



CAREFUL use of a good meter in determining exposure insures consistently good photography throughout the picture. Here cameraman takes reading of incident light with a meter made for the purpose.

do you expose for in the scene?"—and they seem intent upon finding a rule to follow. Obviously, no one rule could possibly cover every situation, but in general we advise *exposing for the most important element in the scene*. Another rule that is an old standby of cameramen is: *Expose for the shadows and let the highlights take care of themselves*.

Actually, neither of these rules of thumb should be taken too literally—nor do they apply in every case. The basic problem (within the latitude of the film) is to expose in such a way that the light areas are not *overexposed* and the dark areas are not *underexposed*. This depends partially on careful selection of film emulsion, but even more so upon control of the amount of light that reaches the film.

Very often, in using high-speed films, (Continued on Page 42)

1952

BOX SCORE

79

A. S. C.
CAMERAMEN

filmed

290

HOLLYWOOD
FEATURE FILMS

Freulich, Neumann

OVER 300 FEATURE FILMS were produced in Hollywood during 1952. Of these, 290 were photographed by 79 ASC cameramen. Topping the list in number of feature film assignments are Henry Freulich, Harry C. Neumann and Ernest Miller—each of whom directed the photography of eleven Hollywood productions, indicating these three men were among the busiest cinematographers in Hollywood during the past year.

Lloyd Ahern

"The Silver Whip," Fox.

John Alton

"Mr. Congressman," MGM.
"Apache Trail," MGM.
"Battle Circus," MGM.
"Thirteenth Man," Ben-Bo Prod.
"The San Quentin Story," Swartz-Doniger.

Arthur Arling

"The Farmer Takes A Wife," Fox.

Lucien Ballard

"Don't Bother To Knock," Fox.
"Night Without Sleep," Fox.
"Baptism Of Fire," Fox.
"The Number," Fox.
"The Desert Rats," Fox.

George Barnes

"Famous," Para.
"War Of The Worlds," Para.
"Road To Bali," Para.
"Little Boy Lost," Para.

Joseph Biroc

"Red Planet," Ind.
"The Twonkey," Oboler.
"Loan Shark," Ind.
"The Glass Wall," Shane-Tors.
"Bwana Devil," Oboler.
"The Tall Texan," Woods.
"Harness Bull," Sequoia.

Charles Boyle

"Untamed," U-I.
"The Texas Man," U-I.
"City Beneath The Sea," U-I.
"Roughshod," U-I.
"Column South," U-I.
"The Stand At Apache River," U-I.

William Bradford

"Barbed Wire," Col.
"Port Sinister," Amer.
"Wagon Team," Autry.
"Blue Canadian Rockies," Autry.
"Winning Of The West," Autry.
"On Top Of Old Smoky," Autry.
"Goldtown Ghost Riders," Autry.
"Pack Train," Autry.

Fayte Browne

"Rough, Tough West," Col.
"Kid From Broken Gun," Col.

Robert Burks

"Maru Maru," W.B.
"The Desert Song," W.B.
"I Confess," W.B.
"The Grace Moore Story," W.B.

Ellis W. Carter

"Rainbow 'Round My Shoulder," Col.
"Outlaw Women," Ind.

Charles G. Clarke

"Sixty Saddles For Gobi," Fox.
"Stars And Stripes Forever," Fox.
(Untitled Western), Fox.

Wilfrid Cline

"She's Working Her Way Through College," W.B.
"The Story of Will Rogers," W.B.
"By The Light Of The Silvery Moon," W.B.
"April In Paris," W.B.

Stanley Cortez

"Models, Inc.," Ind.
"Abbott and Costello Meet Captain Kidd," Woodley.
"China Gold," Wisberg-Pollexfen.
"The Neanderthal Man," Wisberg-Pollexfen.

Edward Cronjager

"Cry of The Swamp," Fox.
"Condor's Nest," Fox.
"Bloodhounds of Broadway," Fox.
"Powder River," Fox.

Floyd Crosby

"Man Crazy," Security Prod.

William Daniels

"Glory Alley," MGM.
"Pat and Mike," MGM.
"Plymouth Adventure," MGM.
"Thunder Bay," U-I.
"Never Wave At A WAC," Ind. Artists-RKO.

Clyde DeVinna

"The Jungle," Voltair Prod.

George Diskant

"Kansas City 1-1-7," Assoc. Players.
"The Bandits of Corsica," Edw. Small.

Edwin DuPar

"The Miracle of Our Lady of Fatima," W.B.
"The Springfield Rifle," W.B.
"She's Back On Broadway," W.B.
"The System," W.B.

Daniel Fapp

"Jumping Jacks," Par.
"Pleasure Island," Par.
(Untitled), Par.

George Folsey

"The Million Dollar Mermaid," MGM.
"The Band Wagon," MGM.

Henry Freulich

"Junction City," Col.

"Prince of Pirates," Col.
"The Last Train From Bombay," Col.
"The Pathfinder," Col.
"Jack McCall, Desperado," Col.
"Target—Hong Kong," Col.
"Serpent of the Nile," Col.
"Slaves of Babylon," Col.
"Ambush At Tomahawk Gap," Col.
"Flame of Calcutta," Col.
"Conquest of Cochise," Col.

Lee Garmes

"This Man Is Mine," RKO.

Maury Gertsman

"Red Ball Express," U-I.
"The Girl Across The Street," U-I.
"It Grows On Trees," U-I.
"The Great Companions," U-I.
"Sioux Uprising," U-I.
"Lone Hand," U-I.
"The Golden Blade," U-I.

Alfred Gilks

"See How They Run," MGM.

Irving Glassberg

"Claim Jumpers," U-I.
"Sally and St. Ann," U-I.
"The Black Castle," U-I.
"Gun Hand," U-I.
"Mississippi Gambler," U-I.

W. Howard Greene

"Swords Before The Mast," Edw. Small.
"Tombstone Trails," Edw. Small.

Burnett Guffey

"Assignment Paris," Col.
"Posse," Col.

Carl Guthrie

"Francis Goes To West Point," U-I.
"The Riding Kid," U-I.
"Bonzo Goes To College," U-I.
"The Jazz Singer," W.B.
"Night Flowers," U-I.
"Stopover," U-I.

Russell Harlan

"The Ring," Ind.
"Ruby Gentry," Ind.

Sidney Hickox

"Alexander, The Big Leaguer," W.B.

Winton Hoch

"Cattle Kate," U-I.
"Return To Paradise," Aspen.

James Wong Howe

"The Fighter," G&H.
"Come Back Little Sheba," Para.
"Main Street To Broadway," Cinema Prod.

and E. Miller Top Scorers With 11 Films Each

Other directors of photography were equally busy. Whereas Freulich's, Neumann's and Miller's assignments were low-budget, short-shooting-schedule productions, many cameramen on contract with major studios were, on the average, busy behind their cameras 40 to 48 weeks out of the year's 52 by virtue of the longer schedules of the higher budget productions which they filmed.

This survey, of course, does not include ASC

men engaged in photographing films for television—a field which saw increasing activity during 1952. Nor does it include ASC members located outside Hollywood, such as Jack Cardiff and Freddie Young, of England, and Joseph Brun and Don Malkames of New York City, all of whom were unusually active during the year. ASC cameramen and their feature film assignments for 1952 are listed below.

Harry Jackson

"Way Of A Gaucho," Fox.
"Pony Soldier," Fox.

Ray June

"Eagle On His Cap," MGM.
"Sky Full Of Moon," MGM.
"Sombbrero," MGM.
"Code Two," MGM.
"A Slight Case of Larceny," MGM.

Milton Krasner

"Dream Boat," Fox.
"Monkey Business," Fox.
"Bagdad on the Subway," Fox.
"Dream Wife," MGM.
"Taxi," Fox.

Charles Lang

"Sudden Fear," RKO.
"Salome," Col.

Joseph LaShelle

"Les Miserables," Fox.
"Something for the Birds," Fox.
"My Cousin Rachel," Fox.

Ernest Laszlo

"Stalag 17," Par.
"Panic Stricken," Thor.
"Scared Stiff," Par.
"The Star," Thor.
"Houdini," Par.
"The Steel Trap," Thor.

Charles Lawton

"The Saber and the Arrow," Col.
"The Happy Time," Col.
"The Outlanders," Col.
"All Ashore!," Col.
"Love Song," Col.

Marcel LePicard

"The Congregation," P.F. Heard
"Jet Job," Mono.
"Plow Jockeys," Mono.

Lionel Lindon

"Caribbean Gold," Par.
"Tropic Zone," Par.
"The Stars Are Shining," Par.
"Rock Grayson's Women," Par.
"Jamaica," Par.
"Here Come The Girls," Par.

Harold Lipstein

"Fearless Fagan," MGM.
"The Desperate Search," MGM.
"Cry Of The Hunted," MGM.
"Fast Company," MGM.
"A Steak For Connie," MGM.

Joseph MacDonald

"What Price Glory," Fox.
"The Full House," Fox.

"Niagara," Fox.

"Blaze of Glory," Fox.
"Nearer My God To Thee," Fox.

Peverell Marley

"Military Policeman," Par.

Ted McCord

"Danger Forward," W.B.
"Stop, You're Killing Me!," W.B.
"Cattle Town," W.B.

William Mellor

"Carbine Williams," MGM.
"Letter From The President," MGM.
"The Naked Spur," MGM.
"Give A Girl A Break," MGM.

Russell Metty

"Scarlet Angel," U-I.
"Against All Flags," U-I.
"Yankee Buccaneer," U-I.
"Magic Lady," U-I.
"Seminole," U-I.
"Man From Alamo," U-I.
"Flame of Timberline," U-I.
"The Prince of Bagdad," U-I.

Ernest Miller

"Dead Man's Trail," Mono.
"Hellgate," Comm. Films
"Barbed Wire," Mono.
"The Maverick," Mono.
"Battle Zone," Allied Artists
"Guns Along the Border," Mono.
"Hired Guns," Mono.
"Star of Texas," Allied Artists
"Stranglehold," Mono.
"The Homesteaders," Mono.
"The Copperheads," Mono.

Victor Milner

"Jeopardy," MGM.

Hal Mohr

"The Member of the Wedding," Col.
"The Four Poster," Col.

Nick Musuraca

"Clash By Night," RKO.
"The Difference," Filmmakers-RKO.
"Split Second," RKO.
"The Blue Gardenia," Gottleib Prod.

Harry C. Neumann

"Wild Stallion," Mono.
"The Rose Bowl Story," Mono.
"Army Bound," Mono.
"Flat Top," Mono.
"Hiawatha," Mono.
"The Royal Mounted Police," Allied Artists
"Son Of Belle Starr," Allied Artists
"Jungle Girl," Mono.
"The Roar of The Crowd," Allied Artists
"Kansas-Pacific," Allied Artists
"Jalopy," Allied Artists

Robert Planck

"Lili," MGM.
"Remains To Be Seen," MGM.
"My Mother and Mr. McChesney," MGM.

Frank Planer

"The 5000 Fingers of Dr. T," Col.
"Roman Holiday," Para.

Ray Rennahan

"Hurricane Smith," Par.
"Pony Express," Par.
"Arrowhead," Par.

George H. Robinson

"Lost In Alaska," U-I.

Charles Rosher

"The Story of Three Loves," MGM.
"Young Bess," MGM.

Harold Rosson

"Three Love Stories," MGM.
"I Love Melvin," MGM.
"Dangerous When Wet," MGM.
"Years Ago," MGM.

Jack Russell

"Sword of Venus," RKO.
"Park Row," Fuller
"Arctic Flight," Mono.
"The Velvet Cage," Ind.
"The Monster From Beneath The Sea,"
Mutual
"The City That Never Sleeps," Republic

Joseph Ruttenberg

"Because You're Mine," MGM.
"The Prisoner of Zenda," MGM.
"Small Town Girl," MGM.
"Julius Caesar," MGM.
"Latin Lovers," MGM.

John F. Seitz

"Botany Bay," Par.
"The Iron Mistress," W.B.
"Desert Legion," U-I.
"Invaders From Mars," Natl. Pics.

Leon Shamroy

"The Snows of Kilimanjaro," Fox.
"Tonight We Sing," Fox.
"Call Me Madame," Fox.
"White Witch Doctor," Fox.

William Sickner

"Down Periscope," L. Parsons
"Tangier Incident," L. Parsons
"Timber Wolf," Allied Artists

William Skall

"Everything I Have Is Yours," MGM.
(Continued on Page 43)



LIGHTING, composition and camera movement are the three main elements the cinematographer employs to give a film the utmost in production value. Of these, lighting is perhaps the most important single factor. Here skillful lighting of a group points up the mood of the story.



COMPOSITION is simply putting dramatic emphasis of a scene in its proper place. Here cameraman and director check composition of a closeup by means of the camera finder.

The Contribution Of Photography To 'Production Value'

By **HERB A. LIGHTMAN**

THE TERM "production value" conveys certain connotations of lavishness which motion picture critics like to translate into superlatives such as "gigantic," "colossal," and "stupendous." Reviewers for film trade papers consistently speak of this picture or that as having great production value. What they usually mean when they speak thus of a film is that the settings, costumes, crowds of extras, and star-studded cast look as if they cost a lot of money.

Actually, the expression is somewhat more elusive to define than this example would indicate—for it represents an overall impression of quality conveyed by a sum total of the elements that go into production. This impression does not necessarily depend upon how much money was spent on the picture; in fact, the effect is all too often exactly the opposite.

When one stops to reflect that American audiences go to the movies to gain a stimulating, if vicarious, emotional experience, it should be evident what elements are most effective in gaining approval for a specific film. These elements include a good story, strong direction, and effective camera



CAMERA MOVEMENT, properly motivated, adds a fluent quality to a production, and makes possible production economies by compressing several takes into one continuous take.

work—but they do not necessarily include spectacular settings, extravagant wardrobe, or the inevitable "cast of thousands." Rather, an overabundance of such factors serves only to clutter the film and prevent its impact from registering fully upon the audience.

Audiences have a right to expect their films to be well-mounted. Yet there is no need to make the mounting of the film an end in itself, for in the final analysis, the trimmings of a picture should serve to enhance the story and keep the continuity moving ever forward.

(Continued on Page 41)

EASTMAN

PROFESSIONAL

MOTION PICTURE

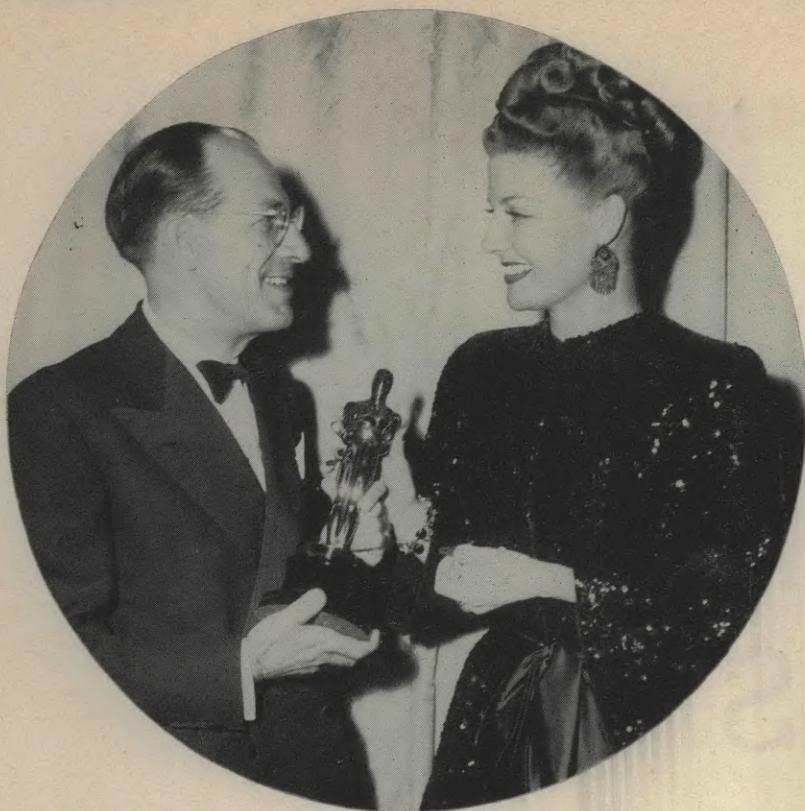
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WHEN ANN SHERIDAN presented "Oscar" to Arthur Miller, ASC, for the photography of "Anna And The King Of Siam," (best black-and-white photography, 1946) it marked the third Academy Award for Miller for cinematography.

45 Years In Cinematography

Three-time "Oscar" winner Arthur Miller recalls some of the significant developments that influenced cinematography.

By HILDA BLACK

"ARTHUR MILLER, one of the industry's veteran cinematographers, has brought high honor to the profession of which he is a part. Entering motion pictures in 1908, Miller has for forty-five years contributed much toward making the film industry great." With these words, American Society of Cinematographers' president Charles G. Clarke lauded one of the Society's most distinguished members on the occasion of its testimonial dinner last month in his honor.

It was an occasion for reminiscing, too, for Arthur Miller had come into the industry in its formative years and had worked with and had even trained many of the cinematographers who had gathered to pay him tribute.

The story of the motion picture industry from the cinematographer's viewpoint, as traced by Arthur Miller, is rich, colorful, sometimes amusing, and nearly always incredible. With Miller, the story begins in 1908 when he went to work for the Crescent Film Company in Brooklyn—a firm which later became known as the New York Motion Picture Company and which was one of the original "independents."

(Continued on Page 31)

IN A MORE RECENT assignment, Miller lines up a shot with a 20th Century-Fox camera, which company developed when advent of sound demanded a more silent camera. Waiting her turn before the lens is Gene Tierney.



THE PATHE was the standard camera of the "industry" back when Arthur Miller (extreme left) began his career as a cinematographer. Second cameraman Geo. Rizard stands behind another Pathe in center. Photo was made while company was shooting a western back in 1919.



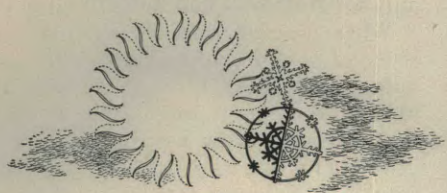
THE BELL & HOWELL camera became the favorite during the 20's. Here Miller is shooting a closeup of Richard Barthelmess posed behind a hastily contrived prop gate, while director George Fitzmaurice watches the proceedings.



ARTHUR MILLER filmed most of Shirley Temple's pictures while she was a child star, using a Mitchell camera which replaced the old reliable but noisy Bell & Howells.



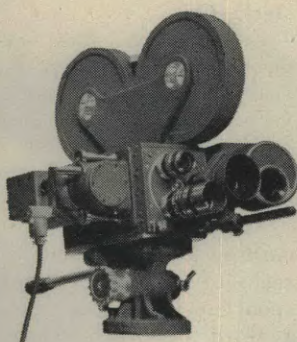
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Howard Cagle
shooting skiing
sequence with his
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ALL CINE CAMERAISTS respond naturally to the urge to shoot new and scenic vistas, regardless how the footage may be used later. Such footage, when deleted in editing, need not be discarded forever. Save it and file it away for possible future use—by you or some brother cine filmer.

Save Those Odd Shots — They're 'Money In The Bank'

Carefully catalogue and file all those odd shots for possible future use; you never know when a discarded shot may save the day by completing a sequence for a new film.

By JOHN FORBES

ALMOST EVERY CINE AMATEUR who edits his films seriously, deletes footage which has no pertinent value to the subject at hand. Especially is this true if the film is a vacation or travel record. All of us, when shooting movies of a vacation trip will make two or more shots of the same subject, using the best shot in the finally edited picture. Then there is the tendency to make random shots of interesting scenes and subjects simply because they appeal especially to your sense of pictorialism at the time.

With some amateurs, such footage is waste material and eventually is discarded. This is not only extravagance,

but shows a lack of imagination. For these odd shots invariably can prove of unusual future value. One never knows when he will have need for a scene filmed a year earlier. Only when editing a picture does the need for previously filmed shots occur and then the subject invariably is too remote to warrant a special trip to film it. In such a case, it is rewarding to be able to refer to a reel of odds and ends or stock shots, and find a suitable scene to round out a new continuity.

One of the most valuable departments in a motion picture studio is the library of stock shots. These consist of scenic and atmospheric shots made all over the

world, atmospheric long shots made on big sets used in past productions, and an endless variety of cinematic odds and ends — airplanes, fire-engines, fires, ships, boats, city traffic, trains, zeppelins, submarines, explosions, cattle, horses and riders—in fact everything and anything that can be photographed.

When a script calls for an incidental scene of anything of that nature the producer's first thought is to turn to the library and see if there isn't a "stock shot" which can be used for it.

If there is, a great deal of time, trouble and money can be saved by using that shot instead of sending out a camera crew to make the scene specially.

This same expedient can be fully as useful to the amateur as to the professional. In fact, stock shots can sometimes be more useful to the home filmer, since his budget seldom would permit the extra expense of making some incidental scenes unexpectedly necessary for his productions, especially if he had to travel far to get just the one scene.

So one of the best things any amateur can do is to begin to build up a library of stock shots.

Right now is a fine time to start. In most parts of the country spring finds the home filmer with his last season's pictures pretty well cut and titled, while the weather without is scarcely conducive to beginning the new season's campaign.

So why not employ your spare time going through the odd scraps of film left over from the editing of last season's—and the previous season's filming? You are almost sure to find a surprising variety of potentially useful stock shots.

Every time this writer browses through the forgotten footage of past years he manages to unearth scenes the very making of which he has forgotten, but which nevertheless often can be used excellently to fill gaps in more recent efforts.

Next, segregate these odd shots according to subject-matter. Make up one reel (it can begin as a simple laboratory spool) of landscapes; another of rivers; a third of beach scenes; another of boating shots; yet others of trains, planes and so on.

Label each reel with a gummed paper label, preferably protected by a covering of scotch tape, and keep your stock shot reels together, in a handy box or cabinet.

Then when you come to edit your next picture, and find a gap in the continuity which must be plugged, all that is necessary is to reach for the appropriate

(Continued on Page 36)



You can bring the brilliance home on Ansco Hypan Film!

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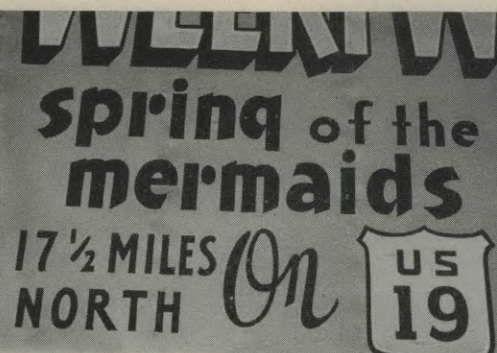
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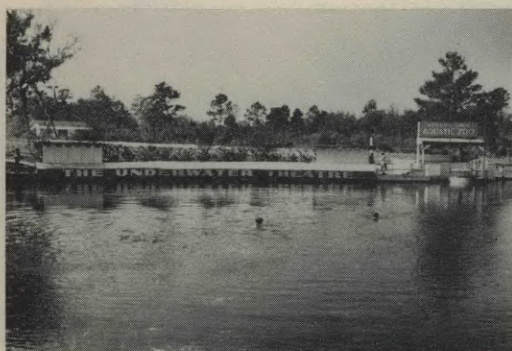
1



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Plan Your Scenes In Sequence

Before you start to film, think the action through scene by scene. An eye for detail and orderly shooting coupled with a keen sense of values make sequencing easy.

By LEO J. HEFFERNAN

INvariably, the framework of the average amateur film consists of a number of sequences which are devised and photographed in such a way that the film can be edited into a homogenous whole. A skillful filmer starts with an idea, often nebulous in his mind, and, throughout the shooting schedule, sticks to the point in his choice of movie material and method of presenting same. The idea eventually becomes a series of well-planned sequences building up to a climax, after which the film is ended as quickly as possible.

Some moviemakers do not fully understand what is meant by the term "sequence." The dictionary offers sev-

eral definitions and there is just one which fits moviemaking—"A series of things following in a certain order or succession." Thus, a sequence, in filming parlance, means a series of scenes following in a certain order or succession; but that doesn't tell all of the story, does it? What, exactly, is a *movie* sequence?

Well, a sequence is an integral part without which the movie would not be complete. It consists of a number of scenes that present various aspects of a scene, event, or action; whatever it is that the movie is revealing at that point in the story. It covers just one line in the framework of the movie, but it is

divided into a number of shots for the best cinematic effect. Because it is only one small part of the movie, amateur filmers are sometimes careless in planning sequences so that, when it comes time to edit a film, they find that they are without some essential shots.

In shooting photoplays, a script is prepared which breaks the film down into sequences, and the sequences are broken down more specifically into long shots, medium shots, closeups, etc. The whole shooting schedule is written down, or should be, and if the script is well planned, it can be followed blindly, since all of the scenes and effects have been visualized in advance. If there is ample cross-shooting, the film editor should have nothing to complain about when he is called upon to put the film together.

Unfortunately, it is not often that an amateur works from a script even when shooting amateur photoplays, so that it is usually a case of on-the-spot planning; and this approach always prevails when he is making scenes for a travelogue. It would be impossible to prepare a shooting schedule to cover a place of interest being visited for the first time. How then can a cameraman assure himself of well-integrated sequences in making a travel or vacation film?

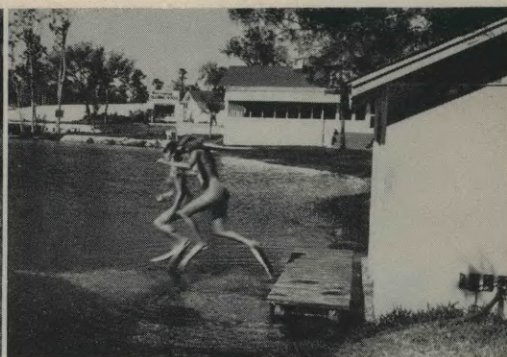
Well, let us suppose that the place being visited is Weekiwachee Springs,



4



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10



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15

Florida. There, not only does the local underwater show provide spectacular material for color cameras, but the management is so camera conscious that lens settings both for diaphragm and distance, as well as film speeds, are announced over the public address system as the show is in progress! A movie-maker is almost certain to come away with excellent footage of the swimming show unless, in the excitement, he forgets to remove the lens cap.

The amateur who approaches this subject without first *planning* his camera attack will probably start with a title, "Underwater Show—Weekiwachee Springs," and then, bang! on will come the spectacular footage without any provocative introduction or build-up. This is not good cinematic form. His screen

audience should be made to lick their lips for a time before the climactic scenes appear on the screen. Instead of a starved, single-punch sequence, wouldn't it be better to create interest in the underwater show by starting the sequence seventeen miles away from Weekiwachee as described in the pictures and captions on this page.

To do this, it is usually necessary to spend more time at a place than does the average tourist because it is advisable to make at least one complete tour of inspection without taking the camera out of its case—or if shots *are* made, they should be of such a nature that they will surely fit into any sequence pattern filmed later. Usually, I spend two days in shooting a worthwhile place

(Continued on Page 38)

ABOVE PHOTOS suggest a scene by scene pattern for a home movie documentary of a visit to Weekiwachee Springs, popular Florida resort: 1—Make shot of billboard for your main title.

2—A closeup of billboard will increase interest in what is to come. 3—Make a dolly shot of family car entering resort, or shoot with camera on tripod if second car is unavailable for camera.

4—Closeup of sign builds interest. 5—Make medium shot showing swimmers putting on swim fins. Follow this with shots of visitors entering underwater theatre. 6—Start show sequence with shots of swimmers entering water and swimming to formation in middle of lake. 7—Include shots of girls made from underwater theatre window.

8—Make shots of start of show as swimmers dive through curtain of bubbles. 9—Make shots of ballet numbers. 10—Swimmers descend 90 feet to underwater cave. 11—Include shots of girls feeding fish underwater; 12—of girl drinking a coke underwater. 13—Be alert for comedy shot possibilities. 14—Include several shots of swimmers maneuvering in water, above and below surface.

15—Close picture with shots of swimmers rising to surface, then submerging to curtsy to audience in underwater theatre.

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45 YEARS IN CINEMATOGRAPHY

(Continued from Page 24)

The space rented by Crescent Film Company was its studio in the daytime, but became a beer garden at night. In view of today's mammoth studios, this may sound ludicrous but it was not unusual for that era. This was before the advent of artificial lighting, and all shooting had to be done by natural light.

"The cameramen were the real filmmakers," says Miller. "In fact, the movie *was* the cameraman in those days. Not only did we do the actual shooting, we also were our own laboratory technicians. From beginning to end what appeared on the screen was the sole responsibility of the cameraman.

"When we didn't know a bit of business, we had to figure it out for ourselves. We had no historical backlog from which to draw. We learned by experimenting. No rules had been set up and every cameraman was strictly on his own.

"I, for one, asked lots of questions in those days. When I saw any unusual effect that another cameraman had achieved I looked him up and asked him how he got it. Tony Gaudio and Billy Bitzer who was D. W. Griffith's great cameraman, and many, many others contributed to my fund of knowledge by answering questions for me. All I've ever learned about this business has been learned in that way—or through my own experiences."

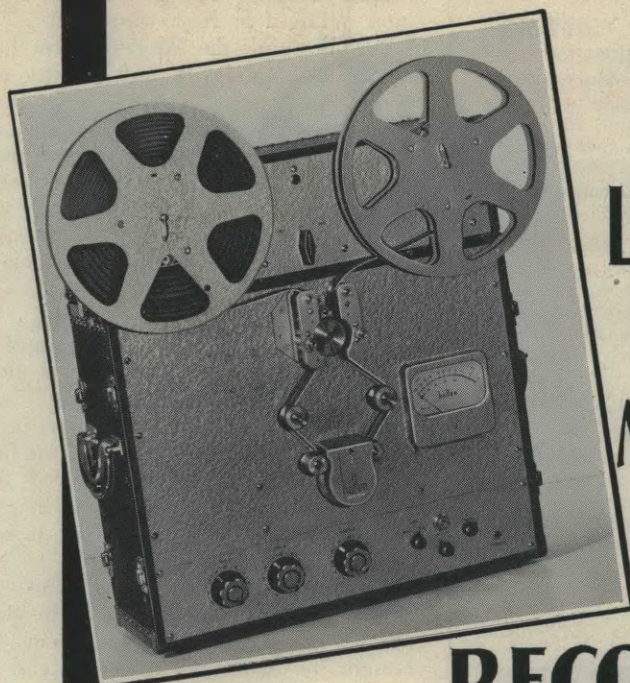
In those early days of picture-making the laboratory was the most important part of any studio set-up, said Miller. The studio, as such, was secondary. Much of the picture was made outdoors, on location, and shooting devices were simple.

"You set your camera," Miller reminisces, "you screwed it down to the floor in whatever position you wanted it—and that was that. There was no moving about, no dolly shots, no striving for this or that angle as in today's pictures.

"Sets were unbelievably simple. Only the things actually handled by the actor were real—all else was painted in. There was a standard format for the set: always a door at the rear toward which the actor eventually walked, thus giving the camera a full figure shot of him. In addition to that one full view, there were two types of foreground shots: One was called French foreground, which cut the actor mid-calf; the other, American foreground, which cut him at the knees. We didn't use closeups at all."

However, a closeup had previously been used in "The Great Train Rob-

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bery." It showed a bandit from the waist up, brandishing two guns, in anticipation it would seem of the much later William S. Hart westerns.

"Don't think the Western films have come into popularity only in the past few years," says Miller. "They have been in vogue almost as long as the picture industry. The New York Motion Picture Company made a one-reeler with James Youngdeer, an Indian who later became one of the early movie stars. Eventually he came to Hollywood and directed pictures for Pathe."

Locations were simple, too. "We travelled everywhere on busses, and all the cameraman's equipment went along—the actors helping to carry it," says Miller. "In those days actors recruited from the legitimate stage felt the new industry beneath their dignity, and therefore disguised themselves when appearing in a movie by wearing some kind of beard, wig, or the like."

"In the early days of movies, the cameraman invested everything he earned in his work and equipment; he bought his own camera, lenses and accessories. We all had our own particular little bundle of tricks, too, and frequently what made one fellow a better cameraman than another was his private collection of lenses. This was before studios had their own departments for making special effects; lap-dissolves, fades, visions, etc., were made right in the camera as the picture was shot."

To protect their pictures from piracy by outlaw film companies, early-day producers created emblems which became a sort of trademark for their product. These were hung prominently on the walls of every set and thus became a pictorial part of every scene. Thus if any part of the picture was pirated by an outlaw company, the trademark visible on the screen revealed the fraud. Later the visible trademarks were abolished in favor of imprinting the company's name along the edge of the film when prints were made.

One of the most restricting elements in early day film production was the lack of a practical artificial light source for photography. When this obstacle was hurdled, a new era dawned for movies.

"The first such lighting that I remember," says Miller, "was Ed Porter's experiments with an arc light that had been taken from a New York street lamp-post. This was mounted in a suitable box and a sheet of bright tin placed at the back for a reflector. The results were highly satisfactory. Within a very short time the use of arc lights to augment daylight became general practice among film makers, and this marked one of the first really important improvements in motion picture photography."

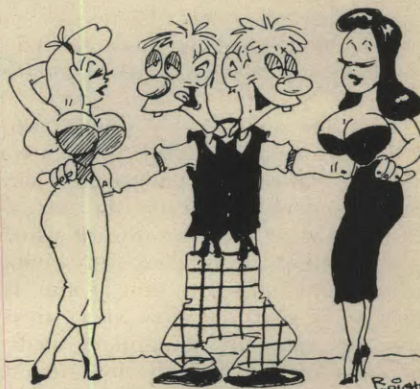
"Not long afterward, another cameraman observing a bright lighting unit then generally used in postoffices, secured one of them for experiment on a motion picture set. Multiple rows of slender tubes gave off a soft, bluish light which was found ideal for motion picture photography, and thus began the use of the now famous Cooper-Hewitt lamps as a lighting source for cinematography."

"With indoor lighting for motion pictures rapidly gaining popularity, other firms developed equipment especially for studio use. One of these was the Wohl Company, on Fulton Street in Brooklyn, which introduced the Wohl Twin-Arcs. Thereafter, other manufacturers developed lighting equipment for the studios. A man named Kleig introduced the now famous "Kleig Lights"—a name that was applied to movie lamps in general for a great many years afterward."

"Following the Kleigs, the Sperry Company introduced the sun arc searchlights. Up until that time we had used only the blue end of the spectrum of our film. Shortly afterward, panchromatic film was introduced, and this plus incandescent lighting now enabled us to utilize the red end of the spectrum, thereby widening the scope of pictorial possibilities in motion picture photography. Thus began the era of incandescent lighting in motion pictures."

Miller recalls that one of the first productions to utilize incandescent lighting exclusively was a two-reeler starring William Collier, Sr., and Mae Busch. It was photographed by Fred Jackman, ASC, for Mack Sennett. That was in 1919. Sennett, the Keystone Comedy king,

(ADV.)



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and one of the most important producers at that time, is credited with building the first enclosed studio.

The first feature production to be photographed entirely with incandescent lighting, Miller recalls, was "Rose of the Rancho," which Lee Garmes, ASC, photographed for First National Studios, about 1924. "Garmes was one of the greatest boosters for incandescent lighting in the business," says Miller.

In the early days of movie making, all cameras were cranked by hand. One of the first things a cameraman had to learn was how fast to turn the camera and to turn it at an even pace. If the pace varied, the action of the players would vary; turning the camera too slow would make them appear walking rapidly if not jerkily on the screen. To point up how cameramen generally were troubled by this, Miller tells an interesting story about Fred Jackman in his search for the answer to correct cranking speed.

Jackman had asked Earl Hines, another old timer, how he timed his cranking. He was told to hold his cranking evenly to sixteen frames per second, and to count seconds by saying "One thousand and one, one thousand and two, etc.," as he cranked. Skeptical of this advice, Jackman decided to investigate for himself. He reasoned that if he could find out at what speed projectionists cranked their machines, he'd have the right answer. So he spent a couple of hours one afternoon in the gallery of a local movie house, sitting close to the projection booth where he could watch the projectionist through the open door. As the projectionist cranked, Fred moved his arm, cranking an imaginary camera in unison. When he thought he had the tempo right, he left the theatre and prepared to crank his camera accordingly on his next picture. What he didn't know, of course, was that projectors were cranked slower than motion picture cameras.

His next assignment ironically enough was on a Harold Lloyd comedy, and the ultra rapid motion which Jackman's slow-cranking gave to Lloyd on the screen, is credited with establishing Lloyd as a new screen comedian. It was the first time that anyone had discovered that comedies could be made funnier when photographed at a lower rate of speed than dramatic pictures. Speeding up action on the screen made the antics of comedians funnier. Projectors in those days were so made that one foot of film travelled past the gate with each turn of the crank, while the film in cameras travelled at half that speed. Dramatic films continued to be cranked at 16 frames per second (until the advent of sound), but comedies were usually cranked at 12 frames per second.

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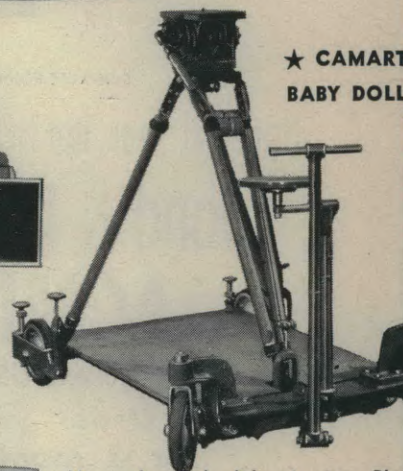
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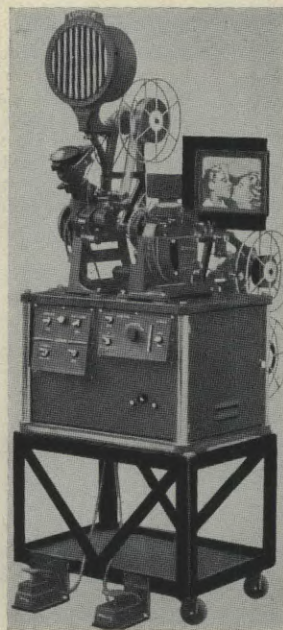
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Cranks eventually went out and when motors were adopted in 1919, Jackman, who was becoming recognized for his unusual special effects, photographed one of the first scenes with the innovation. It was for an air sequence and the camera was fastened to the nose of the plane and operated from switches inside the plane. Motorized cameras were to bring vast changes in photography.

But in Arthur Miller's opinion, the biggest single development in film-making perhaps was the introduction of the cut-back, a technique which involved cutting from one actor to another and then back again. This was introduced around 1911 and is credited to D. W. Griffith. It changed the entire construction of pictures, both in the photography and the editing.

"It introduced a vital personal element into pictures," says Miller, "which formerly they had lacked. It made for warmth and for the first time gave the spectator a feeling of being a part of the scene. It was an unseen element but vitally real. I believe it did more for furthering the progress of motion pictures than any other single factor and, until sound came, was the most progressive step yet made in film production technique.

Still another important accomplishment was the elimination of static in the camera, which was responsible for ruining a lot of film in the old days. Created by the friction of moving parts in the camera, static changed with the weather and was just as unpredictable. A cameraman never knew when he was getting it on his film—only after the film was developed and the tell-tale lightning flashes appeared on his negative. Although many devices were improvised to eliminate static, the trouble was not finally overcome until the introduction by Eastman Kodak Company of X-back coating on motion picture film.

"When sound was added and thus made "talkies" of movies, cinematography suffered a temporary setback. Noise from the camera was picked up along with the dialogue, necessitating the use of large sound-proof booths to house the camera and crew. The booths were not generally mobile and thus the flexibility of the camera was immobilized for a time, but later restored with the introduction of the camera blimp.

"Housed in a sound-proof blimp, which was invented by sound engineer Charles McClay (his son, Howard McClay, is presently motion picture editor of the Los Angeles Daily News) the camera could again be used on the sound stage with all the freedom of the silent-picture days. The first blimps were manufactured by McClay in his own plant, and were first introduced at the old Vitagraph studio. McClay later went

to Warner Brothers where he was employed for many years.

"There are so many improvements in motion pictures, so many things that today seem matter-of-fact that would have astounded us thirty or forty years ago," remarks Miller. "This certainly is a remarkable industry we're in."

One of the most remarkable things, according to Miller's fellow-craftsmen, is that there are men like him to give of his time, energies, and talents to furthering the cameramen's best interests. For today, Miller's main activities center around the Cameramen's Local Union in Hollywood, to which he donates his services.

As a member of the group of early-day cameramen who helped form the Cinema Camera Club in New York City and later joined the west coast group known as the Static Club, it was natural that Miller should become an active member in The American Society of Cinematographers when the two groups merged in 1919.

It was richly-deserved recognition when, at its December meeting in Hollywood, the American Society of Cinematographers paid formal tribute to their fellow-craftsman by honoring him with a plaque—a citation of merit—"in commemoration of his long and brilliant career as a cinematographer and as a leader in his profession."

This was not the first honor bestowed upon Miller, however. For, during his successful career, he has won prestige and acclaim as result of his brilliant photography of films from "The Perils of Pauline" to his most recent pictures. During his years in the motion picture industry he has been honored with seven Academy Award nominations and has received three Academy Awards for black-and-white photography. The Academy "Oscars" for outstanding cinematography of "How Green Was My Valley," "The Song of Bernadette," and "Anna and the King of Siam" stand proudly on the mantelpiece in Miller's den.

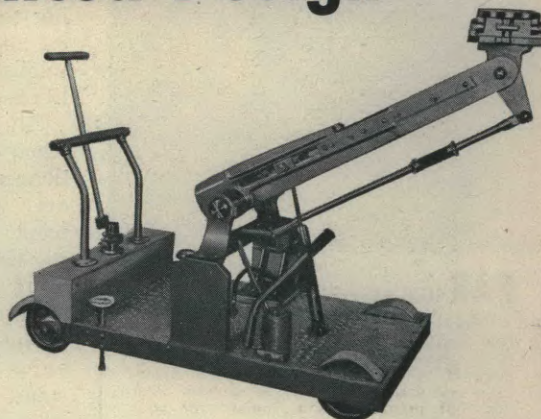
In forty-five years the motion picture industry has outgrown its early crudities and fumbling awkwardness; it has attained important stature as the world's major entertainment medium. Arthur Miller has been a vital cog in the wheel of this expanding phenomenon. Miller, as did other illustrious cameramen such as Fred Jackman Arthur Edson, Philip Tannura, John Arnold, Charles Rosher, and John Boyle, literally grew up with motion pictures. And the fact that the old "flickers" evolved into such an imposing, creative, and entertaining giant can, in large measure, be credited to the resourcefulness and ingenuity of these early-day pioneer lens artists. **END**

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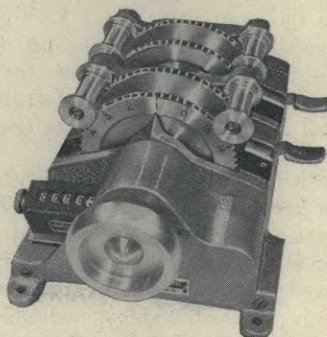


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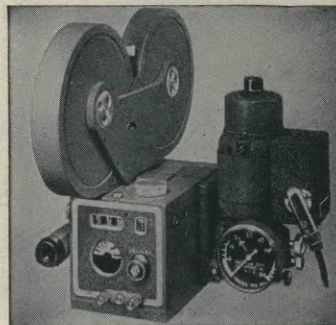
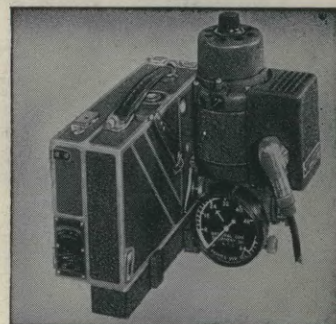
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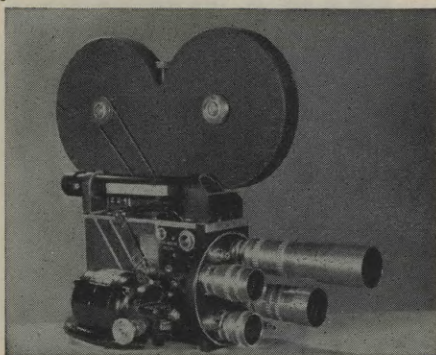
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SAVE THOSE ODD SHOTS

(Continued from Page 26)

ate stock shot reel, run it and select a shot that will serve your purpose.

The matter of keeping these stock reels "alive" and whenever possible adding to them is, of course, of the highest importance. If you once become conscious of the value of your stock shot library, however, it will not be difficult.

All of us encounter dozens of shots when out a-filming—shots interesting in themselves, but not of value to whatever we may have in hand at the moment. Sometimes we can't resist shooting them, anyway; sometimes older and more hardened filmmakers can resolutely steel themselves to pass them by.

But if we are content to shoot them, enjoy their merits, and then let them stand in the stock-shot reels, waiting their chance to be useful in a picture, sooner or later they will come in handy, while meanwhile the library grows usefully.

In the same way, it can be highly advantageous, when vacationing, to keep one's eyes—and lens—open for potentially useful stock scenes. Getting such useful shots on film need not take much of either time or film.

It will not be a noticeable drain on even a slim vacation budget. But the possession of such shots can often save a great deal of time and money when some later picture is being assembled.

This stock-shot idea, valuable as it is to an individual, can be even more valuable if carried out as part of an amateur movie club's cooperative program. Many clubs have libraries of magazines; quite a few have libraries of completed films. A good library of stock-shots could be of immense additional value to the members.

Practically every club member could find among his own film discards scenes which could be contributed to such a club stock shot file. He could also contribute further stock shot footage from odd footage filmed on vacations and business trips.

And if you will consider for a moment the spread of territory and interests covered by the vacations of the members of your own club, you can visualize the range and scope of a club stock-shot collection if even a majority of the members get behind the idea.

One club member may spend his vacation going to Detroit to get a new car; another may go to a convention in New York; a third may go fishing in Canada; a fourth may tour Europe while a fifth visits California, Mexico or Alaska.

If each of these cine clubbers makes but one stock-shot on each roll of film he exposes, the club will at the end of

the season have an unrivaled variety of shots which can be of use to many of the other members.

Perhaps the filmer who went to Europe forgot he needed shots of New York; the conventioneer's spare footage can provide it. Perhaps the man who went to Detroit needs a shot of a train to introduce the start of his trip; the shots of some other member can supply it. And so it goes, growing as the library and the enthusiasm behind it grow.

As a matter of practical club policy, however, it would seem wise to throw some safeguard around the project, so that those non-contributing members who as a rule are always with us, cannot draw upon the collection to which they have contributed nothing. At first thought, a small cash fee from such non-contributors would seem to cover this situation.

But this would reduce the library without adding any footage to replace what is drawn. It would seem wiser, therefore, to make the stock shot library open only to members who have contributed film—and usable film—and further to make participation possible only in proportion to the member's past contributions.

A member who had in the past contributed four good scenes might, therefore, be allowed to take three shots out. If he at the same time brought in further usable shots for the library, he would be entitled to take out additional footage. It seems only good sense to insist that the individual contribute more than he takes, especially during the building-up of such a scheme, for otherwise the library footage—and the

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benefits therefrom—would shrink instead of grow.

In any event, this idea of building a stock-shot library, whether put into practice individually or collectively, can become one of the most practical of aids to building better films.

Of course, even with one's personal stock shot file or that of his cine club, there will invariably arise need for footage not to be found among these stock shots. The needed shot, however, may be available in the stock shot file of some distant amateur filmer or perhaps arrangements can be made with such a filmer to shoot the footage for you.

With this thought in mind, American Cinematographer this month inaugurates a new service for its amateur movie readers—that of a Stock Shot column. Here readers may make known their needs in the way of a special scene or footage. Also, readers with such footage to sell or exchange may list their footage in this column.

The initial column is scheduled to appear in our March issue—providing, of course, sufficient listings have been received by our February 10th deadline. The column is not open to professional film makers.

To enable us to properly present needs or wants in stock shot footage be sure to give these facts:

- 1—Size of film—whether 8mm or 16mm
- 2—Color or black-and-white
- 3—Length (approximate)
- 4—Brief description of each scene wanted or offered.
- 5—Your name and address.

Mail this information to The Editor, American Cinematographer, 1782 North Orange Drive, Hollywood 28, Calif. Deadline for material is 10th of month preceding issue.

REMOTE CONTROL FOR MITCHELL CAMERA

(Continued from Page 18)

by being ganged to the second potentiometer slider simultaneously as it delivers the proper geared torque to the camera mechanism.

The potentiometers which proved adaptable to this problem are those of the ten turn helical type having extreme sensitivity. In the hand control the dial is identical with that on the camera, and the gearing within the hand control and motor unit result in a ratio of 3 turns of control knob to approximately 330 degrees at the lens.

Modification of the camera in this installation was localized at the lens knob on the side of the camera opposite to the finder (Fig. 4). A dovetail bracket with locking lever is mounted perma-

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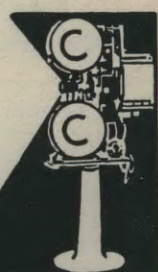
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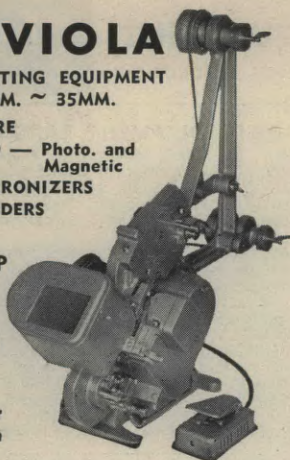
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nently to the focus knob casting, and the fine adjustment knob of the camera lens is broached to fit the serrated output fitting of the Servo motor unit.

The specifications of torque and speed were refined by addition of motion response accuracy and balance position accuracy and the electronic design was assigned to two experienced Servo electronics engineers, Maurice Franco and Irving Sofen of RCA.

With minor modifications of both the mechanical and electronic prototypes the system is now a practical solution to this problem, conforming to the design specifications outlined above.

It is readily apparent in designs of this type that mechanical and electronic considerations must be approached simultaneously with the science of each necessarily becoming aware of the problems and limitations of the other.

With the assistant cameraman now able to actuate the lens with precision from a point removed from the camera, the Director and Cinematographer may now make use of the camera position viewpoint to a greater extent; both in floor level dolly shots and overhead boom shots. END

PLAN SCENES IN SEQUENCE

(Continued from Page 28)

of interest, because it is at night in bed that I come up with my best ideas for interesting sequences. I ask myself, "Now, how can I shoot this place effectively, and yet use the scenes as a background for human action of one sort or another?" I always strive for a novel un-hackneyed approach.

For example, up at Harrison Lake in British Columbia, the resort featured sports—bowling on the green, tennis, horse-back riding, swimming, boating, etc. I arrived early in the afternoon and browsed about until sunset without making a shot. I couldn't, because I was too busy gauging effective camera angles, figuring which were morning and which were afternoon shots, and looking the guests over for possible "actors."

I went into action right after dinner by taking the assistant manager of the hotel into my confidence. He introduced me to a dozen or so guests who had appealed to me as actors and I "contracted" with them for various times of the day depending upon whether they were tennis players, swimmers, etc. One of the hotel waitresses was an excellent equestrienne, so she was told she needn't serve at lunchtime next day, because the horseback sequence was slated for noon. At the time these arrangements were made, I hadn't the

foggiest idea what I was going to do with all that talent!

There are moments between the time one gets into bed and finally falls asleep that are priceless when it comes to getting a proper slant on many things, and I have found that this is the ideal time for writing a mental scenario. That night I went over every camera angle, and visualized the guests acting out my scenes against the most photogenic backdrops the resort afforded. I broke the sequences down into longshots, medium shots and closeups and before I went to sleep had everything committed to memory.

Next morning at nine, the two young couples who were to enact the scenes leading up to the tennis sequences were on hand with all their sports paraphernalia and I made shots of one of the couples walking down a path in the hotel's flower garden. They reached a point where they stopped and looked around for their friends. The camera discovers the friends—the second couple—seated on a grassy slope in an expectant attitude, then cuts back to the first couple who sight their friends and run toward them. A medium shot shows the foursome exchanging greetings, after which they walk toward the tennis court. The camera then goes on a Cook's tour by itself as shots of the court and of the games in progress were made. This sounds long, but it really is a short sequence.

Other sequences were made showing the highlights of bowling on the green, as well as swimming and horseback riding. Naturally, the latter sequence was used to feature the best of the resort's lake and mountain viewpoints; and each of the sequences began in a novel way. The sub-title, "At Harrison Lake, the accent is on sports—such as—" and then there are separate sub-titles for "Bowling on the Green," "Tennis," "Horseback Riding," and the last category, "—and Flirting!" This latter sequence shows the assistant manager of the hotel stalking a blonde guest as she walks about the grounds. He overtakes her on a garden bridge and asks her if she will share a motorboat ride with him. She answers, "No, No, a thousand times No!" and as she shakes her head melodramatically, the scene lap-dissolves into a shot of both of them during a motorboat ride, and they are obviously enjoying it immensely. This scene ends the Harrison Lakes section of this film which became "Hail, British Columbia!"

The reason I have waxed reminiscent is that there are so many possible ways to devise sequences beyond those which are most frequently used that it is impractical to make suggestions without knowing the facts surrounding a particular moviemaking problem. I can tell

you how certain conditions—such as those which I found at Harrison Lake—will lend themselves to cine treatments of one sort or another, but it is impossible to establish standards for rule of thumb use in shooting.

For those interested in a set of rules which they can count off on their fingers, the following may be of help:

1. Do not make shots of any nature without a previously conceived plan of action.
2. Go over the area carefully, noting viewpoints, salient characteristics of the scenes, position of the sun at various times of the day, and give particular consideration to evaluation of the cine material and possible subjects who may be persuaded to work in the scenes.
3. Ponder over the facts which came to light during the inspection tour. This is the time for origination and visualization of ideas. Do not waste thought on the sensational shots you would like to make *but can't*. Stick to the available material and devise ways of heightening interest in it by means of a sequence which will employ a fresh approach to the subject.
4. Get away from the simple pictorial reporting approach of the average amateur by surprising your audience occasionally with a shot or a sequence which tickles their risibilities. "Make them laugh," is the best advice which an amateur can follow. More about this later.
5. Try to make every sequence the embodiment of visual images which were formed in your mind as the result of caprice. This does not mean that your approach should be coy or whimsical—but it is a fact that inspirations spring from the capriciousness of one's mind. A skeleton was propped up on the piano in front of Chopin as he wrote his famous Funeral March! If you get a lift out of devising a sequence, perhaps some of the fun may rub off on the audience.
6. Each sequence should be a neat package with the story thread firmly understood in the initial scene and with each shot a bit more interesting than its predecessor. Stick to the point throughout without digressing and, if you can, introduce a note of finality to the last scene in a sequence so that shifting into another sequence will appear to be natural. Shoot the individual scenes in a sequence in the order that they will be spliced into the finished movie; not to save editing—but principally because you will work without a script and may neglect to film an essential scene.

Laughs are hard to come by in an

(Continued on Page 45)

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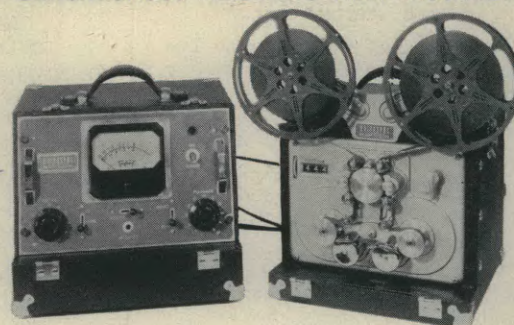
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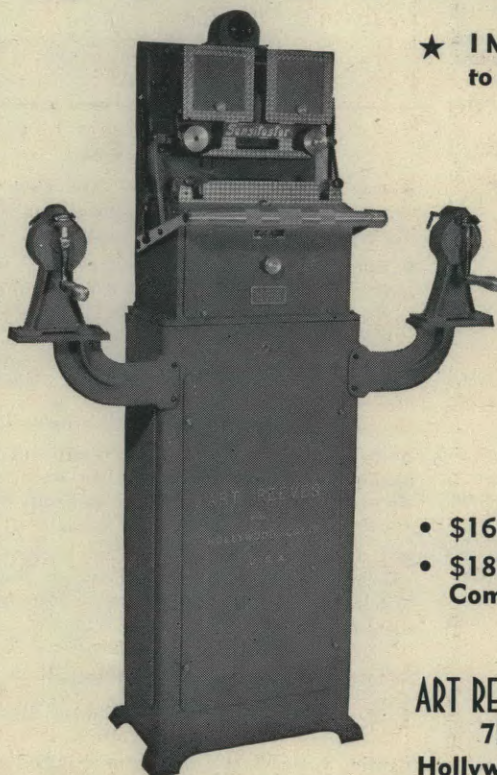
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Current Assignments of A.S.C. Members

Major film productions on which members of the American Society of Cinematographers were engaged as directors of photography during the past month.

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★ ★ ★ ★

Allied Artists

- HARRY C. NEUMANN, "Jalopy," with Leo Gorcey, Huntz Hall, Jane Easton, the Bowery Boys. William Beaudine, director.

Columbia

- HENRY FREULICH, "Conquest of Cochise," (Esskay Pics.) (Technicolor), with John Hodiak, Robert Stack, and Joy Page. William Castle, director.
- LESTER WHITE, "49 Men," (Esskay Pics.) with John Ireland, Richard Denning, and Suzanne Dalbert. Fred F. Sears, director.

Metro-Goldwyn-Mayer

- GEORGE FOLSEY, "The Band Wagon," (Technicolor) with Fred Astair, Cyd Charisse. Vincente Minnelli, director.
- WILLIAM MELLOR, "Give A Girl A Break," (Technicolor) with Marge and Gower Champion, Debbie Reynolds. Stanley Donen, director.
- ROBERT SURTEES, "Mogambo," (Technicolor) with Clark Gable, Ava Gardner, Grace Kelly and Douglas Sinden. John Ford, director.
- RAY JUNE, "A Slight Case of Larceny," with Mickey Rooney, Eddie Bracken, Elaine Stewart, and Marilyn Erskine. Don Weis, director.
- JOSEPH RUTTENBERG, "Latin Lovers," (Technicolor) with Lana Turner, Ricardo Montalban, John Lund, Louis Calhern, Jean Hagen, Beulah Bondi, Eduard Franz, Rita Moreno, and The Modernaires. Mervyn LeRoy, director.
- HAROLD LIPSTEIN, "The Great Diamond Robbery," with Red Skelton, Cara Williams, James Whitmore, Dorothy Stickney, Adolphe Menjou, Reginald Owen, and Horace McMahon. Robert Z. Leonard, director.
- HAL ROSSON, "Years Ago," with Spencer Tracy, Jean Simmons, Teresa Wright, Tony Perkins, Kay Williams, and Mary Wickes. George Cukor, director.

Paramount

- GEORGE BARNES, "Little Boy Lost," with Bing Crosby, Claud Dauphin, Nicole Maurey, Chris Fourcade. George Seaton, director.
- LIONEL LINDON, "Here Come The Girls," (Technicolor) with Bob Hope, Tony Martin, Arlene Dahl. Claude Binyon, director.
- RAY RENNAHAN, "Arrowhead," (Technicolor) with Charlton Heston, Jack Palance, Katy Jurado, Michael Keith, Mary Sinclair, Michael Shannon, Judith Ames, and Milburn Stone. Charles Marquis Warren, director.
- DANIEL FAPP, "(Untitled)," with Dean Martin, Jerry Lewis, Donna Reed, Barbara Bates, Don Porter, and Joseph Calleia. Norman Taurog, director.

Republic

- JOHN L. RUSSELL, JR., "City That Never Sleeps," with Gig Young, Mala Powers, Edward Arnold, Marie Windsor, and Wally Cassell. Producer-director, John H. Auer.

AMERICAN SOCIETY OF CINEMATOGRAPHERS

FOUNDED January 8, 1919, The American Society of Cinematographers is composed of the leading directors of photography in the Hollywood motion picture studios. Its membership also includes non-resident cinematographers and cinematographers in foreign lands. Membership is by invitation only.

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20th Century-Fox

- JOE MACDONALD, "Nearer My God To Thee," with Clifton Webb, Barbara Stanwyck, Thelma Ritter. Jean Negulesco, director.
- LUCIEN BALLARD, "The Desert Rats," with James Mason, Richard Burton, Robert Newton, Chips Rafferty, Charles Tingwell, and James Lilburn. Robert Wise, director.
- HARRY WILD, "Gentlemen Prefer Blondes," (Technicolor) with Jane Russell, Marilyn Monroe, Charles Coburn, Elliott Reid, and George Winslow. Howard Hawks, director.
- CHARLES G. CLARKE, "Fight Town" (Technicolor) with Jeanne Crain, Dale Robertson, Richard Boone, Carol Mathews and Carl Betz. Harmon Jones, director.
- LEON SHAMROY, "White Witch Doctor," (Technicolor) with Susan Hayward, Robert Mitchum, Walter Slezak. Henry Hathaway, director.

Universal-International

- MAURY GERTSMAN, "The Golden Blade," (Technicolor) with Rock Hudson, Piper Laurie, Gene Evans, Kathleen Hughes, and Edgar Barrier. Nathan Juran, director.

- RUSSELL METTY, "The Prince Of Bagdad," (Technicolor) with Victor Mature, Mari Blanchard, Guy Rolfe, Virginia Field, Palmer Lee, Ludwig Donath, Jim Arness, Nick Cravat, Charles Arnt, and Howard Petrie. George Sherman, director.

- CLIFF STINE, "East Of Sumatra," (Technicolor) with Jeff Chandler, Marilyn Maxwell, Anthony Quinn, John Sutton, Jay C. Flippen, and Eugene Iglesias. Budd Boetticher, director.

- CHARLES BOYLE, "The Stand At Apache River," (Technicolor) with Stephen McNally, Julia Adams, Hugh Marlowe, Hugh O'Brian, Russell Johnson, and Jaclynne Greene. Lee Sholem, director.

- CARL GUTHRIE, "Stopover," with Barbara Stanwyck, Richard Carlson, Maureen O'Sullivan, Richard Long, Marica Henderson, Lori Nelson, and Billy Gray. Douglas Sirk, director.

Warner Brothers

- EDWIN DUPAR, "The System," with Frank Lovejoy, Robert Arthur, Dan Seymour, and Victor Perrin. Lewis Seiler, director.
- ROBERT BURKS, "The Grace Moore Story," (Technicolor) with Kathryn Grayson, Walter Abel, Merv Griffin, Ann Doran, and Rosemary DeCamp. Gordon Douglas, director.
- WILFRED CLINE, "Calamity Jane," (Technicolor) with Doris Day, Howard Keel, Allyn McLerie, Dick Wesson, and Philip Carey. David Butler, director.

Independent

- JAMES WONG HOWE, "Main St. To Broadway," (Cinema Prods.) with Tallulah Bankhead, Olivia de Havilland, Faye Emerson, H. Fonda, R. Harrison, M. Martin. Tay Garnett, director.
- JOSEPH BIROC, "Harness Bull," (Sequoia Pictures) with Edward G. Robinson, Joan Vohs, and Edward Binns. Arnold Laven, director.
- NICK MUSURACA, "The Blue Gardenia," (Gottlieb Prods.) with Anne Baxter, Richard Conte, Ann Southern, Raymond Burr, Jeff Donnell, Richard Erdman, Ray Walker, and Nat King Cole. Fritz Lang, director.
- HARRY STRADLING, "A Lion Is In The Streets," (Cagney Prod.) (Technicolor) with James Cagney, Barbara Hale, Ann Francis, Lon Chaney, Jr., Frank McHugh, Mickey Simpson, John McIntire. Raoul Walsh, director.
- STANLEY CORTEZ, "China Gold," (Wisberg-Pollexfen Prod.) with John Archer, Hillary Brooke, Noel Cravat, and Philip VanZandt. A. Wisberg and J. Pollexfen, producers-directors.
- JOHN ALTON, "The San Quentin Story," (Swartz-Doniger Prod.) with Louis Hayward, Joanne Dru, Paul Kelly, Maureen O'Sullivan, George MacReady and Horace McMahon. Walter Doniger, director.
- STANLEY CORTEZ, "The Neanderthal Man," (Wisberg-Pollexfen Prod.) with Richard Crane, Robert Shane, and Doris Merrick. E. A. Dupont, director.

'PRODUCTION VALUE'

(Continued from Page 22)

Granted that a film has a good script, capable actors, and an efficient production crew—the resulting picture still depends upon the presentation of these elements for the generally good, bad, or indifferent impression it creates when flashed upon the screen. It is for this reason that the *photography* of a feature production is so important—for it is the camera through whose eye the story is actually presented.

The photography cannot, of course, compensate for a poor script or faulty direction; but it can do a great deal to impart quality to a picture that might otherwise be merely adequate. In the same way, unimaginative camera work can detract from the most expensive and lavishly mounted extravaganza.

Looking back at such recent artistic and equally popular films as "Our Lady of Fatima," "The Four Poster," "Scaramouche," "Snows of Kilimanjaro," and "My Cousin Rachel," we find that none of these films could be termed an "extravaganza." There were no breath-taking sets, no casts of thousands, no gigantic, colossal, or stupendous effects calculated to transfix the audience. Yet each of these films bore the stamp of quality, plus an atmosphere of richness in presentation—an effect which in almost every case can be traced to a combination of intelligent set design and outstanding camera work.

Considering production value from the standpoint of the camera, we find that the director of photography has three elements with which to work, in addition to the actual physical equipment which he uses to expose the film. These elements are: lighting, composition, and camera movement—and the way in which he uses them accounts for the quality of the final photographic result.

Imagination and careful pre-planning are two factors that help the efficient cinematographer to get the most from the equipment he is using. Often he is assigned to a picture a day or two before shooting begins, and thus is not allowed sufficient time to prepare his lighting and photographic plans for the picture. In such a case, the film is bound to suffer photographically to a greater or lesser degree.

But where the cinematographer is given the script well in advance and has time to carefully plan the photography, he can work out patterns of lighting, composition and camera movement that will present the story on the screen to best advantage, and at the same time convey an impression of greater production value.

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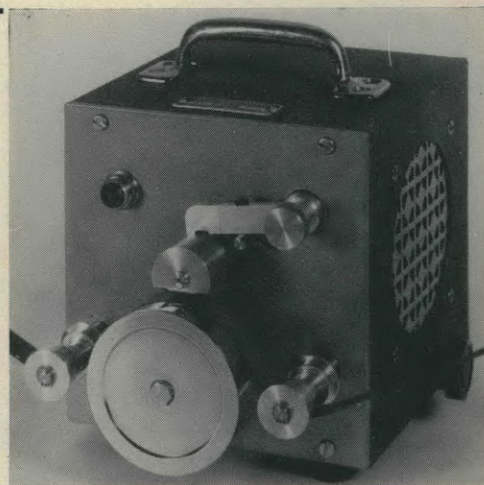
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Taking the three photographic elements one by one, we can see how each contributes to the quality of the final result. *Lighting* is perhaps the most important single factor, for light is the medium with which the cameraman "paints" his scenic compositions. In a cheap picture, flat, unimaginative lighting is generally used, because that is the quickest and least expensive way to light a set. The result, however, *looks* cheap on the screen. If the cinematographer on a picture of this type were given sufficient time to study the script, the

settings, and the action to be filmed, he could work out a lighting pattern with depth, modeling, and richness—and the resulting film would show a good deal more quality on the screen.

Similarly, *composition* is an important factor that is often neglected both in high and low budget pictures. Good composition amounts simply to putting the dramatic emphasis of a scene in its proper place. The top-notch cinematographer achieves this result by making sure that the lines within his frame, the perspective of the camera angle,

and the pattern of movement on the screen—all lead toward the focal point of the action. Again, pre-planning allows the cinematographer to chart effective composition in advance, so that he is not forced simply to set up the camera quickly and shoot every scene from a straight-forward, undramatic angle.

The third factor, *camera movement*, is too often thought of as an "expensive" element, since moving camera shots take more time to set up, rehearse, light and photograph. This seeming extravagance is, however, balanced by the fact that it is often possible to lace together by means of camera movement as many as five scenes that would otherwise require separate setups. Certainly smooth camera movement, correctly motivated, is a device that adds fluent quality to a photoplay and carries the story forward more effectively.

Producers of low-budget films invariably economize by engaging mediocre talent to place a mediocre story on the screen within restricted number of shooting days. The result almost always is a mediocre film—but the system has flourished because the double-feature policy has demanded a constant flood of good, bad and indifferent product in order to fill the exhibitors' schedules. However, present-day audiences are more critical than they used to be, and are now prone to criticize technical shortcomings as well as dramatic faults in a film.

In production ranks this trend has inspired two reactions. First, several of the major studios have announced the intention of making only "A" pictures in the future, thus falling back on the faulty *more-money-more-quality* line of reasoning. Second, and much more significant, certain low-budget producers have decided to engage top-notch talent and to save money by intelligent pre-planning to cut down wasted time in production.

Speaking of the relationship between the camera and production value, director of photography Lee Garmes, ASC, recently observed: "The camera can produce an aura of quality by pointing up the strong points of the production, while at the same time minimizing its inadequacies. The result depends upon a happy blending of composition, lighting and camera movement. I believe in *under-lighting* in order to stimulate the audience's imagination. Correct use of low-key, silhouette and shadow allows the audience to complete in its own mind the idea that the writer and director are trying to put across. To light a set brilliantly in order to show everything at once would destroy that effect."

Thus it may be seen that production

value depends in great measure upon proper camera emphasis and atmospheric lighting, as well as upon making the most efficient use of the story elements at hand, be they lavish or modest. Careful pre-planning in every phase of production, teamwork between director and cinematographer, plus the use of top-notch technicians—all of these factors figure heavily in the impression of quality that reaches the screen. It is these elements and not towering budgets that create real production value. **END**

'5000 FINGERS'

(Continued from Page 17)

dungeon, and the nightmarish aspect of the Mound Country and the weird butlerly men who pursued him.

Here color was deliberately underplayed; indeed for the most part there was little or no color in the sets. Only the boy appeared in full color against the negative backgrounds—a photographic innovation which becomes a pictorial delight on the screen.

The pictorial effectiveness of the dungeon scenes, wherein a score of demented, mouldy-looking musicians play fantastic instruments, is enhanced by striking use of colored light and green, luminous makeup. When first he shot this scene, Planer employed conventional set lighting—with disappointing results. He changed the lighting pattern completely, lowering the key and adding color to the light. Here also he employed ultraviolet and fluorescent light with great effectiveness.

Another interesting innovation was that employed by Planer when shooting closeups of the characters of the Mound Country. To enhance the illusion of moonlight, a narrow beam of colored light was directed on the eyes of the men—a different color for each one.

An unsuccessful attempt was made to photograph the familiar stage technique of reversing the coloring of subjects by painting them with luminous paint and then switching from regular incandescent to ultraviolet light. Only in the closeups did the transition register completely; it wouldn't record at all on the film in medium and long shots. The reason, Planer learned, is that it was

The Stanley Kramer Company produced "The 5000 Fingers of Dr. T" for Columbia Pictures Corporation. Directed by Roy Rowland the picture features Peter Lind Hayes, Mary Healy, Hans Conreid and Tommy Rettig. Filmed in Technicolor, the production is scheduled for release in April, 1953.

impossible to build up any appreciable illumination volume with ultraviolet light..

For all closeups, other than those mentioned immediately above, Frank Planer used his familiar Houdini eye-light, a narrow, hand-held incandescent unit which he employs to cast the small pin-point of sparkling light that gives life to the eyes of players in closeups. This, Planer handles himself, crouching just below the lens hood of the camera and directing the light on eyes of the player as necessary.

Planer is loud in his praise of the new Columbia cone lights. The quality of illumination they give is the most ideal for color photography, he says, adding that conventional harsh lighting invariably takes away some of the quality of color.

"The use of cone lights," said Planer, "made it easier to light those sets which called for the addition of matt shots at the top. The piano courtyard set especially, while it extended clear to the ceiling of the sound stage, was heightened further pictorially in the finished result through effective matt shot photography. This called for a special quality of lighting on the overall set, and this the cone lights provided most successfully."

In analyzing the photography of "5000 Fingers," Planer said the aim from the very beginning was to picture the scenes and players from the viewpoint of a child, employing fantasy through lighting and camera treatment. "In short what we sought photographically was the effect of a typical Walt Disney cartoon, done in live action."

TECHNIQUES FOR EXTERIORS

(Continued from Page 19)

it will be found that when using even the smallest lens opening the scene will be overexposed. In this case, there are two ways of cutting down exposure. One is to use *neutral density filters* of optically ground grey glass that absorb all colors in equal relative proportion. The other alternative is to cut down shutter angle. Most 35mm professional cameras and some 16mm cameras (such as the Cine Kodak Special and the Pathe-16) have variable shutters which make possible compensating for light conditions by reducing the shutter opening and consequently the amount of light reaching the film.

There is more to using an exposure meter than merely pointing it at the scene to be filmed. Many cameramen do just that, and then wonder why their exposure is so far off.

First, you must decide what elements of the scene you are principally exposing for. When people appear in the composition, obviously you must be mainly concerned with the rendition of skin tones. Therefore, the principal reading should be taken just a few inches from the subject's face. Other readings, taken from camera position, etc., should be balanced to favor this principal reading.

Second, a meter usually "sees" a wider angle than that encompassed by the camera lens. Therefore, it is necessary to take most meter readings from a position closer to subject than camera position.

On this same subject, it should be pointed out that excessive sky areas in a scene are especially misleading when you are taking a meter reading. The sky is usually overly-bright in relation to the rest of the scene, and will tend to boost a meter reading higher than it should be for exposing the actual subject. For this reason, it is wise to tilt meter downward a bit (at about a 30° angle) in order that the cone of focus will cover more foreground and less sky background.

Most cameramen are aware of the importance of a good sunshade over the lens, which will prevent strong light from causing flare. The element of an exposure meter is similarly affected when scattered rays of light fall upon its unshaded surface, causing a deceptively bright reading of the scene. Therefore it is advisable to shade the meter cell opening either with your

hand, or with a home-made cardboard shade in order to achieve a more faithful reading.

Filters have three primary purposes:

- To correct the rendition of certain colors.
- To cut down the amount of light reaching the film.
- To produce special pictorial effects.

In any event, filters should not be used just for the sake of using them, but always with a specific purpose in mind.

First, use filters to *correct* certain color tones, notably to darken skies and water and thus keep them from "burning up" the composition. Yellow and orange filters, used in this way, add a certain richness to exterior scenes and provide a pictorial contrast between flesh tones and the sky. Red filters, over-correcting blue tones, darken the sky dramatically, but must be used very carefully, as they tend to "wash out" skin tones unless special make-up is used.

The second function, that of *cutting down exposure*, is achieved, as we have pointed out, through the use of neutral density filters. These filters are available in varying densities from 25% to 200%. They also tend to flatten out contrast to a greater or lesser degree depending upon the density of filter used.

The third function of filters, that of producing *special pictorial effects*, is used in simulating night effects outdoors in daylight, and in fantasy films

(Continued on page 44)

1952 BOX SCORE

(Continued from Page 21)

William Snyder

"The Korean Story," RKO.
"Blackbeard The Pirate," RKO.

Clifford Stine

"Almost Married," U-I.
"Ma and Pa Kettle at the Front," U-I.
"Abbott and Costello Go To Mars," U-I.
"Law and Order," U-I.
"East of Sumatra," U-I.

Archie Stout

"Big Jim McLain," W.B.
"The Sun Shines Bright," Rep.
"Alma Mater," W.B.

Harry Stradling

"Hans Christian Andersen," Goldwyn
"Angel Face," RKO.
"Forever Female," Para.
"A Lion In The Streets," Cagney-W.B.

Walter Streng

"Mr. Walkie Talkie," Hal Roach, Jr.

Karl Struss

"Limelight," Chaplin.
"Tarzan and the She Devil," Lesser.

Robert Surtees

"The Merry Widow," MGM.
"Tribute To A Bad Man," MGM.
"Vaquero," MGM.
"Mogambo," MGM.

Leo Tover

"We're Not Married," Fox.
"My Wife's Best Friend," Fox.
"Big Man," Fox.
"The President's Lady," Fox.

Paul Vogel

"The Girl In White," MGM.
"Days Before Lent," MGM.
"You For Me," MGM.
"Rogue's March," MGM.
"The Clown," MGM.
"The Girl Who Had Everything," MGM.

Joseph Walker

"Affair In Trinidad," Col.

Gilbert Warrenton

"Lost Women Of Zarpa," Howco Prod.

Lester White

"White Lightning," Allied Artists
"49 Men," Col.

Harry Wild

"Beautiful But Dangerous," RKO.
"Breakup," RKO.
"Gentlemen Prefer Blondes," Fox.

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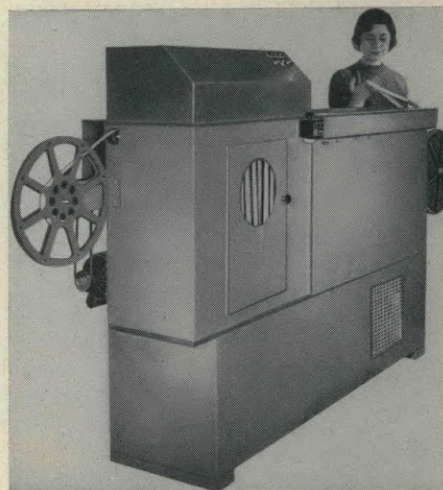
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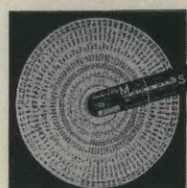
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END

TECHNIQUES FOR FILMING EXTERIORS

(Continued from Page 43)

for creating weird dream sequences, etc. For night effects, the red filters (23A, 25A, 29F, 70, and 72) are most widely used. For softer night effects in sunlight, a combination of 50B with 23A is quite effective. For the fantasy effects mentioned 25A, 29F, 70, 72, and 88A filters are used with infra-red film.

In outdoor filming, especially in bright sunlight, there is a naturally harsh contrast between the light and shade areas of the composition. This contrast is especially unflattering in close-ups of persons. In order to soften the harsh effect and fill in the shadow areas, we use simple reflectors that can be easily constructed by pasting squares of silver or gold foil onto plywood flats.

Correctly used, these reflectors impart a professional *finish* to the film—but if over-used, they may cancel out shadow areas almost completely, creating a flat and undramatic result. Be careful to use your reflectors intelligently, since it takes a certain amount of soft shadow to give a pleasant modeling to faces.

There are two kinds of reflector surfaces: the hard variety (silver), and the soft (gold). Soft reflectors give a nice smooth quality in close-ups, but should not be used in color cinematography, since they reflect an unusually warm color of light.

Closely allied to reflectors in usefulness to the cameraman are *scrims* of gauze netting which are helpful in diffusing sunlight when it falls too harshly upon faces in close-ups. These scrims, either single or double depending upon the amount of diffusion desired, are suspended out of camera range, between the sun and the subject, and function to break up and soften the harsh direct rays of the sun.

Often unwanted reflections from some surface such as a white wall, etc., may cause your subject to squint. This glare can be softened in many cases by placing a *gobo* (black square of wood or plywood) between the subject and the offending surface.

For diffusing close-ups a diffusion disc is very helpful—but a layer or two of gauze net placed before the lens will give almost the same effect. In using net as a diffuser, be careful that it is well-shielded, as sunlight falling directly upon it will cause flare. Also, be sure that the net is placed as close to the lens as possible; otherwise the criss-cross pattern of the cloth may come into focus just sharply enough to be noticeable.

Volumes can, and perhaps *should*, be written on the subject of composition in motion pictures. We cannot hope in

this small space to discuss the subject at great length, but feel it necessary to present a few basic rules for making exterior screen compositions more effective.

Cinema composition is not the static thing it is in still photography. Screen composition is fluid and ever-changing; therefore, it requires a more precise, more versatile kind of planning in order to insure visual patterns that will remain interesting throughout the action of an entire sequence.

But aside from adding interest to the visual presentation of the story, the function of effective composition is to lead the eye directly to the most important point in the scene. For this reason, action should be so staged that the lines of the setting in which it is played will lead to the areas of greatest dramatic importance.

A *closed* composition is one which is framed on all sides (by trees, etc.) in such a way as to prevent the eye from straying from the focal point of action. This kind of foreground framing, besides aiding dramatically is also effective pictorially in lending depth to the scene.

In the case of a *pan* or *dolly* shot, always plan in advance your separate compositions for each camera *stop*, then plot in the camera movement that will tie these separate compositions together. As for movement within the scene, it is a basic tenet that lines of action leading straight across the screen are less potent dramatically than those originating near one of the corners of the frame and leading into it diagonally. A line of action or static design leading into the pattern from the lower left hand corner of the screen is considered to be the

strongest single line of composition.

Similarly, it is undramatic to divide the frame equally in half either horizontally or vertically by any compositional line (such as a tree or the horizon). By mentally dividing a scene into thirds both ways, and placing the focal point of interest at any of the intersections of these imaginary lines, we evolve a composition that is much more effective than one that is divided into halves.

In shooting snow exteriors, the primary problem is to cut down the extreme brightness contrast ratio between the white snow and the shadow areas. This problem of reducing harsh contrast also applies to desert and seascapes.

In the case of snow in bright sunlight, the brightness contrast of the scene is tremendous. Add to this the substantial amount of light reflected from the white surface, and you have a good deal of light to contend with.

Various filters and filter combinations have been used by professional cinematographers to soften snow scenes so that they do not "burn up" on the screen. Some of these filters and their effects are described below:

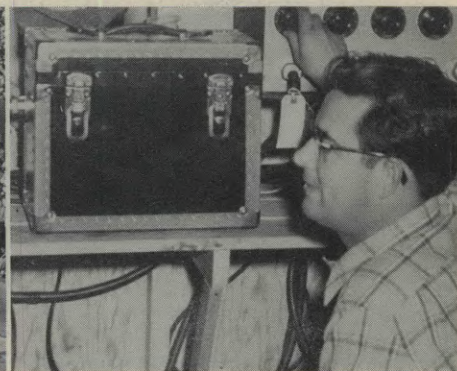
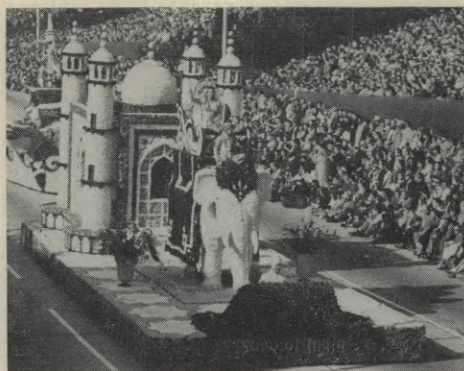
3N5 (a combination of Aero 1 and 50% Neutral Density filters) gives a light color correctness to the sky without increasing contrast of the remainder of the scene.

5N5 (a combination of Aero 2 and 50% Neutral Density filters) — gives medium sky correction without excessive contrast. It has the same basic action as 3N5, but with added detail. It is used to soften strong glare and contrast in snow scenes having heavy shadows.

X2 and 23A filters super-imposed. This combination darkens skies and produces a pleasant softness that cuts contrast between snow and shadow.

If any errors must be made in ex-

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posing snow scenes, they should preferably be made toward the underexposed side of the scale.

It is our intent in this brief treatise to give the student of cinematography the benefit of some of the experiences and practices of the professional, in order that he may better apply professional methods to his own camera work. As with all skills, it is the persistent application of procedures that make for perfection—diligent study that makes such applications successful.

The foregoing article is condensed from "The Cinema Workshop," by Charles Loring.

PLAN SCENES IN SEQUENCE

(Continued from Page 39)

amateur film, but sometimes they pop up unexpectedly during the filming without having been planned. They usually are the result of a sudden change of mood and are most spontaneous when the picture is following a serious vein and, without warning, something very droll or ridiculous happens. During the filming of "Land Snakes Alive!" my camera was trained upon a boy six years old who was playing with a four foot long non-poisonous snake. The boy had bare arms and shoulders, and the snake crawled over his shoulders, then down his chest, and eventually started to crawl under his arm. The audience was always aghast to see such a young boy handling the snake. When the snake touched the boy's underarm, it tickled, and the boy jumped and giggled, then looked apologetically in the direction of the camera because he knew he had spoiled the scene. That was what *he* thought, but it gets a laugh every time, and so the scene was left in.

It is fun devising sequences with laughs in mind, but it must be borne in mind that laughter is an involuntary spasm of the respiratory organs and people don't laugh because they want to. They won't laugh because you want them to, either, unless you *make* them laugh. There are two ways of doing this, the sudden change of mood already described, and the more familiar, though seldom analyzed system wherein one funny action or event follows another so rapidly that one's nervous system has to throw off the excess of emotion in the pleasant way Nature has provided.

It helps very much when a movie-maker understands the mechanics of laughter, but it is not very often an amateur produces a comedy which employs the difficult cumulative laugh system. It is better to stick to sequences which are simple to film, and which in-

volve basic human emotions.

If the action in a Christmas movie shows Father, tipsy, indulging in too much holiday spirit, his antics will not get a laugh. But if he enters the living room and tries to assist Mother in wrapping up Christmas presents, and contrast shots are made showing Mother's perfect wrapping technique, and then Father's befuddled attempts at wrapping the presents—the quick changes from the sublime to the ridiculous might provoke laughter.

The effectiveness of comedy and other sequences will depend upon the imagination of the moviemaker, for it is only by thinking the action through scene by scene that the little twists and personal touches can be introduced into the footage. By all means, think in terms of sequences, do not starve them, and make each one fit like a gem within the framework of your movie.

WHAT'S NEW

(Continued from page 10)

Groverlite, announces that these two items of motion picture lighting equipment will henceforth be made and distributed by Natural Lighting Corp., 2753 El Roble Dr., Los Angeles, 41, Calif. New additions to the Groverlite models are soon to be introduced for the TV field, according to Grover.

F&B Announce Two New Items—Florman and Babb, distributors of movie and TV equipment, 70 West 45th St., New York City, announce the distribution of two new important items of motion picture equipment: the Kelly Cine Calculator, and the foreign-made Angenieux Retrofocus wide angle lens. The latter is an extreme W/A lens, 9.5mm with an aperture of f/2.2, and said to have excellent resolution and contrast. It is very critical for back focus and must be accurately mounted for optimum results. Available immediately in C mounts, list price of lens is \$175.00.

The Kelly Cine Calculator is a pocket-size slide-rule in disc form possessing a great deal of information usually found in pages of handbooks. Data available at a glance includes Depth of Field, Hyperfocal Distance, Aperture Scales, Field of View, Filter Factors, and Film Speeds Per Second—plus many others. The calculator comes in two models—35mm model, and 8-16mm model for cine photographers. List price is \$3.95.

Norwood Meters—Director Products Corporation, New York City, announces that the Norwood Director exposure meter will be available in Europe after January 1st.



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